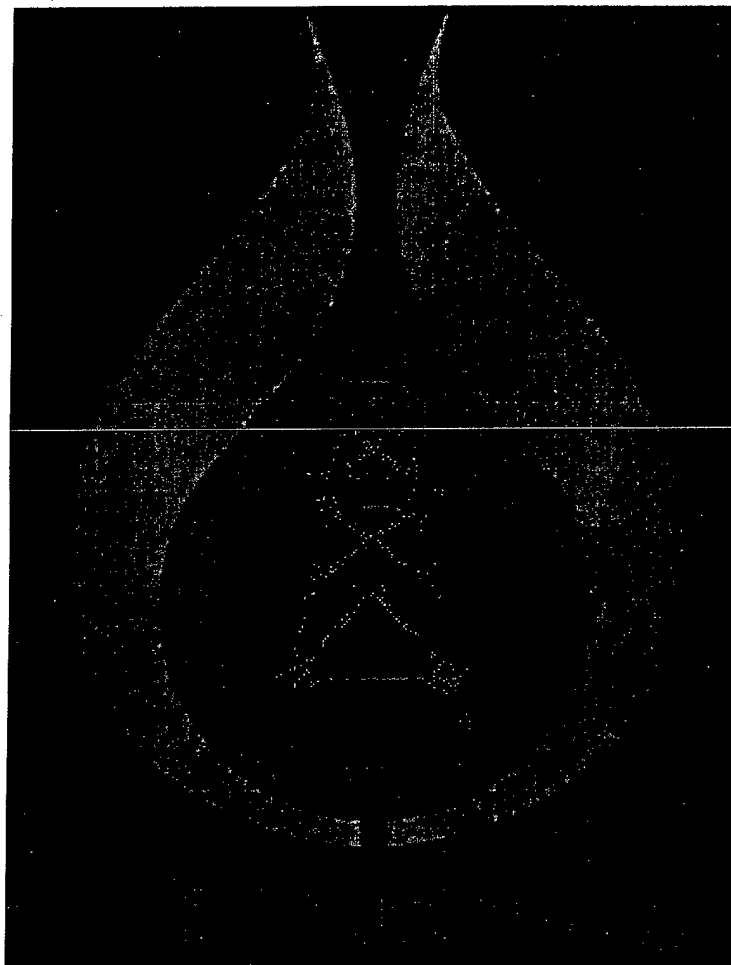




Schlumberger



**Montara H1 ST1
End of Well Report**

	Name	Signature	Date
Schlumberger QC			
Approval			



Schlumberger

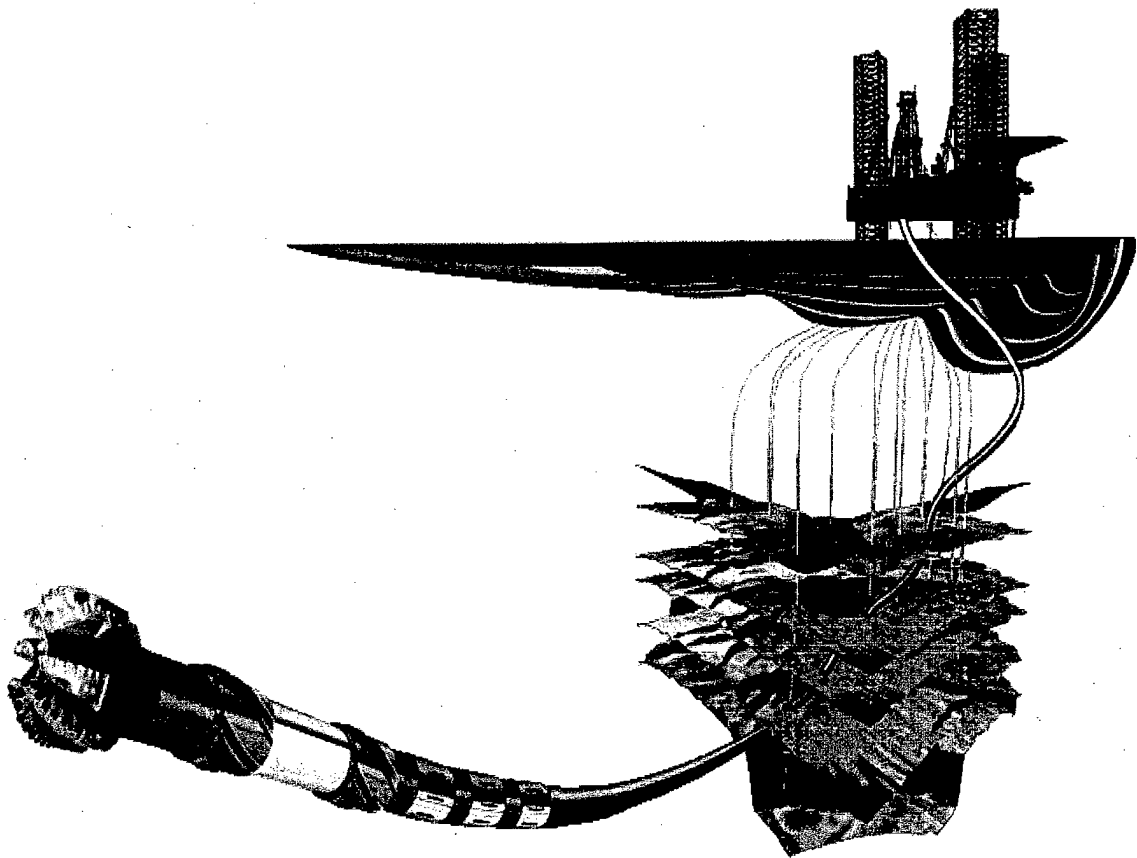
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1. General Information





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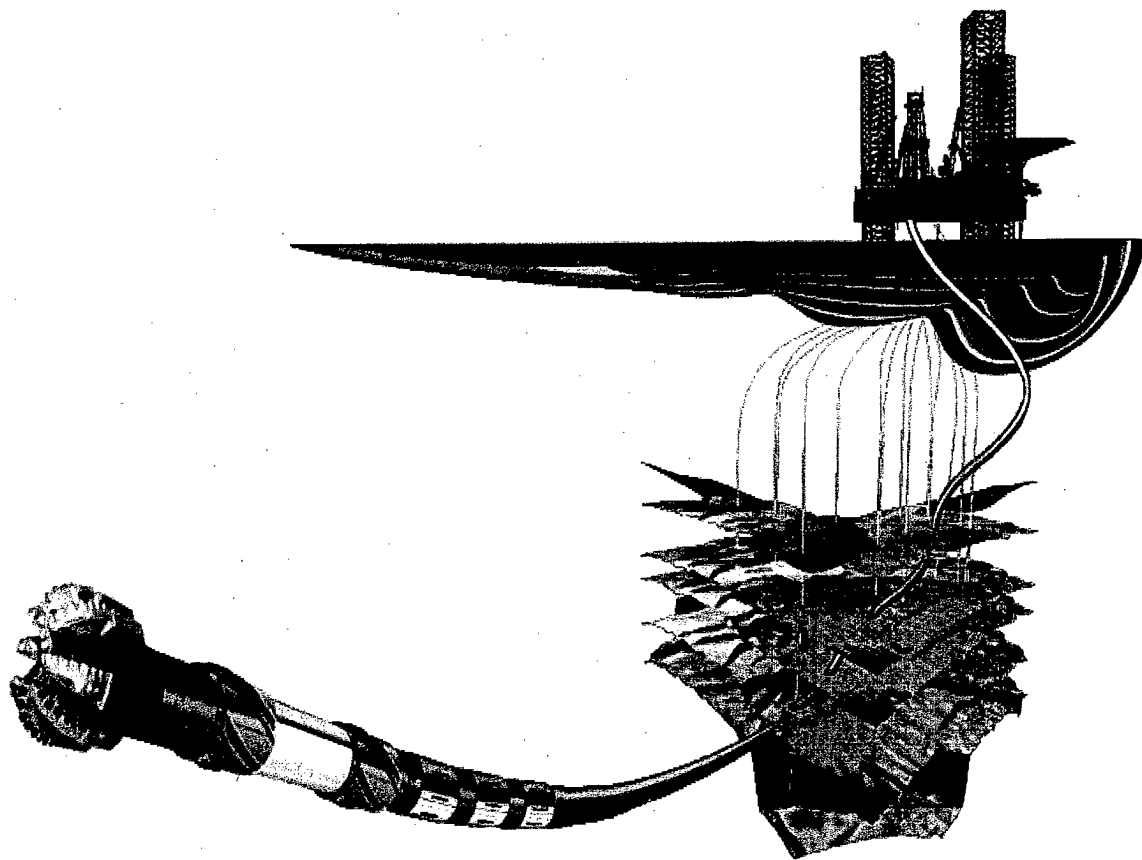
General Information

Well Name:	Montara H1 ST1	
Rig:	West Atlas	
Field:	Montara	
Location:	AC/L7	
Country:	Australia	
Cell Members:	David Gibson Charlie Maramara Rika Kartorahardjo	LWD Engineer LWD Engineer LWD Engineer
	Jody Leahey Matt Blacker	Directional Driller Directional Driller
Town Contacts:	Dave Rapp H. Spoljaric Dave Wallace	Location Manager Drilling Services Manager R&M Supervisor Perth
Company Representatives:	Noel Treasure Lindsey Wishardt Paul O'Shea Craig Klumpp	Company Man Company Man Company Man Company Man
	Dave Hartney Mike Woodmansee	Wellsite Geologist Wellsite Geologist



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2. Geomagnetic Data and Survey Reference Criteria



**Schlumberger**

Geomagnetic Data and Survey Reference Criteria

Geomagnetic Data

Magnetic Model:	BGGM version 2008
Magnetic Date:	18 th January 2009
Magnetic Field Strength:	46852 nT
Magnetic Declination:	2.475°
Magnetic Dip:	-40.577°

Survey Reference Criteria

Reference G:	998.24 mg
Reference H:	937.23 HCNT
Reference Dip:	-40.58°
G value Tolerance:	2.50 mg
H value Tolerance:	6.00 HCNT
Dip Tolerance:	0.45°

Survey Corrections Applied

Reference North:	Grid North
Magnetic Declination:	2.475°
Grid Convergence:	-0.3378°
Total Azimuth Correction:	2.813°
Vertical Section Azimuth:	214.20°



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Survey Reference Location

Montara H1 Surface Coordinates:

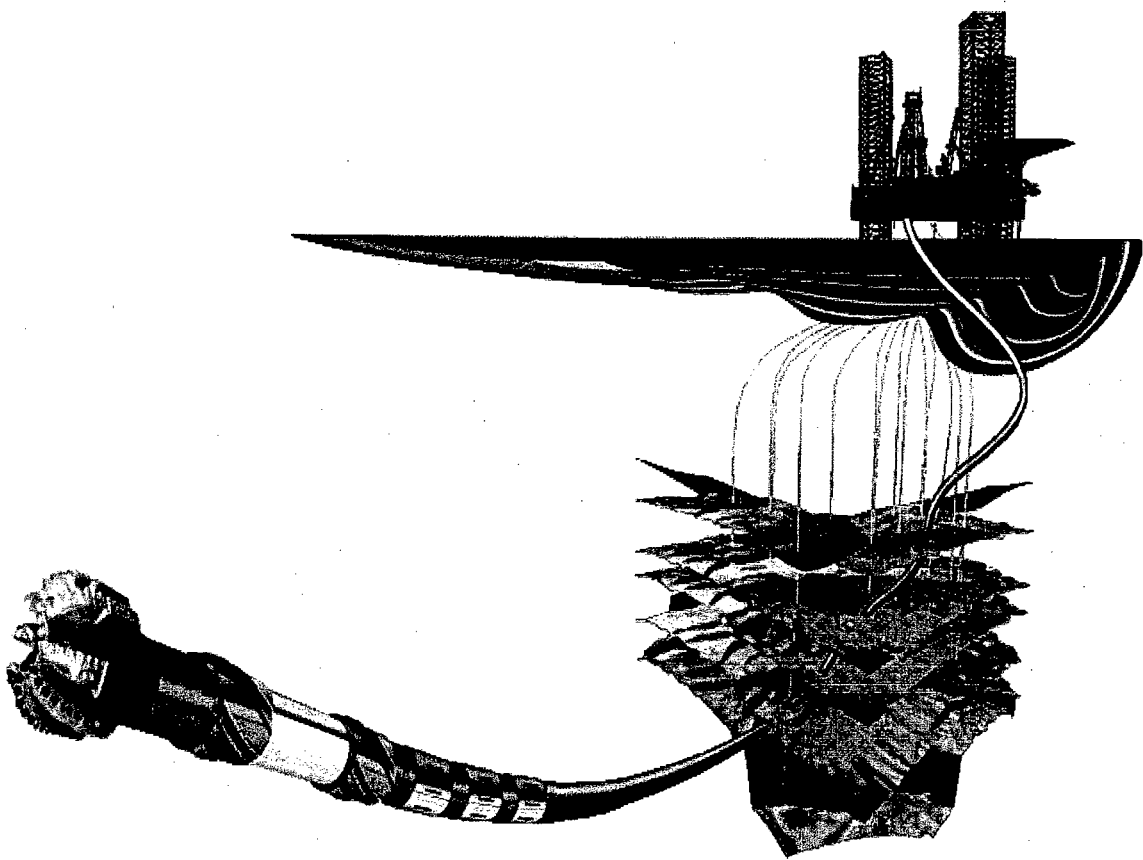
Latitude:	12° 40' 20.522" South
Longitude:	124° 32' 21.833" East
Northing:	N 8598602.77 meters
Easting:	E 667168.98 meters
Datum:	GDA94/MGA Zone 51
Vertical Datum:	Australian Height Datum (AHD)
Rotary Table Elevation:	35.17 m above AHD

NOTE: all depths are in metres measured depth below rotary table (mMDRT) unless otherwise stated.



Schlumberger

3. Definitive Survey





Montara H1 ST1 Survey Report

Report Date: April 18, 2009 Client: PTTEP Field: PTTEP Australasia/ACRL-3/Montara Structure / Slot: Montara / Montara H1 Well: Montara H1 Borehole: Montara H1 ST1 UWI/API#: Survey Name / Date: Montara H1 ST1 Actual Survey / March 4, 2009 Tort / AHD / DDI / ERD ratio: 150.097* / 1752.11 m / 6.089 / 0.660 Grid Coordinate System: GDA94/MGA94 Zone 51 Location Lat/Long: S 12 40 20.470, E 124 32 22.158 Location Grid N/E Y/X: N 8598604.300 m, E 667178.800 m Grid Convergence Angle: -0.33780481* Grid Scale Factor: 0.99994577	Survey / DLS Computation Method: Minimum Curvature / Lubinski Vertical Section Azimuth: 214.200* Vertical Section Origin: N 0.000 m, E 0.000 m TVD Reference Datum: RT TVD Reference Elevation: 35.2 m relative to AHD Sea Bed / Ground Level Elevation: -77.500 m relative to AHD Magnetic Declination: 2.467* Total Field Strength: 46854.910 nT Magnetic Dip: -40.569* Declination Date: March 04, 2009 Magnetic Declination Model: BGGM 2008 North Reference: Grid North Total Cor Mag North -> Grid North: -2.805* Local Coordinates Referenced To: Well Head
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Comments	Measured Depth (m)	Inclination (deg)	Azimuth Grid (deg)	TVD (m)	Sub-Sea TVD (m)	Vertical Section (m)	NS Grid North (m)	EW Grid North (m)	DLS (deg/30 m)	Build Rate (deg/30 m)	Walk Rate (deg/30 m)	Northing (m)	Easting (m)	Latitude	Longitude
Tie-In	0.00	0.00	0.00	0.00	-35.20	0.00	0.00	0.00	0.00	0.00	0.00	8598604.30	667178.80	S 12 40 20.470	E 124 32 22.158
	112.00	0.45	25.07	112.00	76.80	-0.43	0.40	0.19	0.12	0.12	0.12	8598604.70	667178.99	S 12 40 20.457	E 124 32 22.164
	117.00	0.42	27.55	117.00	81.80	-0.47	0.43	0.20	0.21	-0.18	14.88	8598604.73	667179.00	S 12 40 20.456	E 124 32 22.165
	122.00	0.38	30.48	122.00	86.80	-0.51	0.46	0.22	0.27	-0.24	17.58	8598604.76	667179.02	S 12 40 20.455	E 124 32 22.165
	127.00	0.35	33.96	127.00	91.80	-0.54	0.49	0.24	0.22	-0.18	20.88	8598604.79	667179.04	S 12 40 20.454	E 124 32 22.166
	132.00	0.32	38.14	132.00	96.80	-0.57	0.51	0.25	0.23	-0.18	25.08	8598604.81	667179.05	S 12 40 20.453	E 124 32 22.166
	137.00	0.29	43.20	137.00	101.80	-0.59	0.53	0.27	0.24	-0.18	30.36	8598604.83	667179.07	S 12 40 20.453	E 124 32 22.167
	142.00	0.26	49.31	142.00	106.80	-0.62	0.55	0.29	0.25	-0.18	36.66	8598604.85	667179.09	S 12 40 20.452	E 124 32 22.167
	147.00	0.24	56.68	147.00	111.80	-0.64	0.56	0.31	0.23	-0.12	44.22	8598604.86	667179.11	S 12 40 20.452	E 124 32 22.168
	152.00	0.22	65.40	152.00	116.80	-0.66	0.57	0.32	0.24	-0.12	52.32	8598604.87	667179.12	S 12 40 20.451	E 124 32 22.169
	157.00	0.21	75.37	157.00	121.80	-0.67	0.58	0.34	0.23	-0.06	59.82	8598604.88	667179.14	S 12 40 20.451	E 124 32 22.169
	162.00	0.21	86.17	162.00	126.80	-0.68	0.58	0.36	0.24	0.00	64.80	8598604.88	667179.16	S 12 40 20.451	E 124 32 22.170
	167.00	0.21	97.09	167.00	131.80	-0.69	0.58	0.38	0.24	0.00	65.52	8598604.88	667179.18	S 12 40 20.451	E 124 32 22.170
	172.00	0.21	132.34	172.00	136.80	-0.70	0.57	0.39	0.26	0.00	211.50	8598604.87	667179.19	S 12 40 20.451	E 124 32 22.171
	177.00	0.21	119.63	177.00	141.80	-0.70	0.56	0.41	0.28	0.00	-76.26	8598604.86	667179.21	S 12 40 20.452	E 124 32 22.171
	182.00	0.20	123.75	182.00	146.80	-0.70	0.55	0.42	0.11	-0.06	24.72	8598604.85	667179.22	S 12 40 20.452	E 124 32 22.172
	187.00	0.19	132.74	187.00	151.80	-0.70	0.54	0.44	0.19	-0.06	53.94	8598604.84	667179.24	S 12 40 20.452	E 124 32 22.172
	192.00	0.18	138.44	192.00	156.80	-0.69	0.53	0.45	0.13	-0.06	34.20	8598604.83	667179.25	S 12 40 20.453	E 124 32 22.173
	197.00	0.20	145.80	197.00	161.80	-0.69	0.52	0.46	0.19	0.12	44.16	8598604.82	667179.26	S 12 40 20.453	E 124 32 22.173
	202.00	0.23	161.44	202.00	166.80	-0.68	0.50	0.47	0.39	0.18	93.84	8598604.80	667179.27	S 12 40 20.453	E 124 32 22.173
	207.00	0.31	170.82	207.00	171.80	-0.66	0.48	0.47	0.55	0.48	56.28	8598604.78	667179.27	S 12 40 20.454	E 124 32 22.173
	212.00	0.47	183.74	212.00	176.80	-0.63	0.45	0.47	1.09	0.96	77.52	8598604.75	667179.27	S 12 40 20.455	E 124 32 22.174
	217.00	0.44	178.84	217.00	181.80	-0.60	0.41	0.47	0.29	-0.18	-29.40	8598604.71	667179.27	S 12 40 20.457	E 124 32 22.174
	222.00	0.34	158.29	222.00	186.80	-0.58	0.37	0.48	1.02	-0.60	-123.30	8598604.67	667179.28	S 12 40 20.458	E 124 32 22.174
	227.00	0.60	178.38	227.00	191.80	-0.55	0.33	0.48	1.82	1.56	120.54	8598604.63	667179.28	S 12 40 20.459	E 124 32 22.174
	232.00	0.76	184.04	232.00	196.80	-0.50	0.27	0.48	1.04	0.96	33.96	8598604.57	667179.28	S 12 40 20.461	E 124 32 22.174
	237.00	0.78	186.15	237.00	201.80	-0.44	0.21	0.48	0.21	0.12	12.66	8598604.51	667179.28	S 12 40 20.463	E 124 32 22.174
	242.00	0.80	187.14	242.00	206.80	-0.38	0.14	0.47	0.15	0.12	5.94	8598604.44	667179.27	S 12 40 20.465	E 124 32 22.173
	247.00	0.85	188.67	247.00	211.80	-0.31	0.07	0.46	0.33	0.30	9.18	8598604.37	667179.26	S 12 40 20.468	E 124 32 22.173
	252.00	0.93	189.82	251.99	216.79	-0.24	-0.01	0.45	0.49	0.48	6.90	8598604.29	667179.25	S 12 40 20.470	E 124 32 22.173
	257.00	1.02	190.35	256.99	221.79	-0.17	-0.09	0.43	0.54	0.54	3.18	8598604.21	667179.23	S 12 40 20.473	E 124 32 22.172
	262.00	1.11	192.28	261.99	226.79	-0.08	-0.18	0.41	0.58	0.54	11.58	8598604.12	667179.21	S 12 40 20.476	E 124 32 22.172
	267.00	1.19	193.02	266.99	231.79	0.01	-0.28	0.39	0.49	0.48	4.44	8598604.02	667179.19	S 12 40 20.479	E 124 32 22.171
	272.00	1.25	192.56	271.99	236.79	0.11	-0.39	0.37	0.36	0.36	-2.76	8598603.91	667179.17	S 12 40 20.482	E 124 32 22.170
	277.00	1.35	191.98	276.99	241.79	0.22	-0.50	0.34	0.61	0.60	-3.48	8598603.80	667179.14	S 12 40 20.486	E 124 32 22.169
	282.00	1.43	193.25	281.99	246.79	0.33	-0.61	0.32	0.51	0.48	7.62	8598603.69	667179.12	S 12 40 20.490	E 124 32 22.169
	287.00	1.54	194.99	286.99	251.79	0.45	-0.74	0.28	0.71	0.66	10.44	8598603.56	667179.08	S 12 40 20.494	E 124 32 22.168
	292.00	1.62	195.45	291.98	256.78	0.58	-0.87	0.25	0.49	0.48	2.76	8598603.43	667179.05	S 12 40 20.498	E 124 32 22.166
	297.00	1.73	196.77	296.98	261.78	0.72	-1.01	0.21	0.70	0.66	7.92	8598603.29	667179.01	S 12 40 20.503	E 124 32 22.165
	302.00	1.88	199.42	301.98	266.78	0.87	-1.16	0.16	1.03	0.90	15.90	8598603.14	667178.96	S 12 40 20.508	E 124 32 22.163
	307.00	1.93	199.08	306.98	271.78	1.03	-1.32	0.10	0.31	0.30	-2.04	8598602.98	667178.90	S 12 40 20.513	E 124 32 22.162
	312.00	2.00	198.57	311.97	276.77	1.20	-1.48	0.05	0.43	0.42	-3.06	8598602.82	667178.85	S 12 40 20.518	E 124 32 22.160
	317.00	2.01	199.79	316.97	281.77	1.37	-1.65	-0.01	0.26	0.06	7.32	8598602.65	667178.79	S 12 40 20.524	E 124 32 22.158
	322.00	2.02	202.06	321.97	286.77	1.54	-1.81	-0.07	0.46	0.06	13.62	8598602.49	667178.73	S 12 40 20.529	E 124 32 22.156
	327.00	2.09	203.08	326.97	291.77	1.71	-1.98	-0.14	0.47	0.42	6.12	8598602.32	667178.66	S 12 40 20.534	E 124 32 22.154
	332.00	2.17	203.69	331.96	296.76	1.90	-2.15	-0.21	0.50	0.48	3.66	8598602.15	667178.59	S 12 40 20.540	E 124 32 22.151
	337.00	2.25	203.96	336.96	301.76	2.09	-2.32	-0.29	0.48	0.48	1.62	8598601.98	667178.51	S 12 40 20.546	E 124 32 22.149
	342.00	2.23	203.77	341.95	306.75	2.28	-2.50	-0.37	0.13	-0.12	-1.14	8598601.80	667178.43	S 12 40 20.551	E 124 32 22.146
	347.00	2.24	204.37	346.95	311.75	2.47	-2.68	-0.45	0.15	0.06	3.60	8598601.62	667178.35	S 12 40 20.557	E 124 32 22.144
	352.00	2.20	204.69	351.95	316.75	2.66	-2.86	-0.53	0.25	-0.24	1.92	8598601.44	667178.27	S 12 40 20.563	E 124 32 22.141
	357.00	2.41	206.34	356.94	321.74	2.86	-3.04	-0.62	1.32	1.26	9.90	8598601.26	667178.18	S 12 40 20.569	E 124 32 22.138
	362.00	2.41	207.64	361.94	326.74	3.07	-3.23	-0.71	0.33	0.00	7.80	8598601.07	667178.09	S 12 40 20.575	E 124 32 22.135
	367.00	2.54	208.63	366.93	331.73	3.28	-3.42	-0.82	0.82	0.78	5.94	8598600.88	667177.99	S 12 40 20.581	E 124 32 22.132
	372.00	2.47	210.04	371.93	336.73	3.50	-3.61	-0.92	0.56	-0.42	8.46	8598600.69	667177.88	S 12 40 20.588	E 124 32 22.128
	377.00	2.44	211.27	376.92	341.72	3.72	-3.79	-1.03	0.36	-0.18	7.38	8598600.51	667177.77	S 12 40 20.594	E 124 32 22.125
	382.00	2.49	213.43	381.92	346.72	3.93	-3.97	-1.15	0.63	0.30	12.96	8598600.33	667177.65	S 12 40 20.599	E 124 32 22.121
	387.00	2.57	215.49	386.91	351.71	4.15									

Comments	Measured Depth (m)	Inclination (deg)	Azimuth Grid (deg)	TVD (m)	Sub-Sea TVD (m)	Vertical Section (m)	NS Grid North (m)	EW Grid North (m)	DLS (deg/30 m)	Build Rate (deg/30 m)	Walk Rate (deg/30 m)	Northing (m)	Easting (m)	Latitude	Longitude
	427.00	2.72	225.92	426.87	391.67	5.96	-5.53	-2.46	0.37	0.30	4.44	8598598.77	667176.34	S 12 40 20.650	E 124 32 22.077
	432.00	2.75	226.97	431.87	396.67	6.19	-5.69	-2.64	0.35	0.18	6.30	8598598.61	667176.16	S 12 40 20.656	E 124 32 22.072
	437.00	2.82	226.17	436.86	401.66	6.43	-5.86	-2.81	0.48	0.42	-4.80	8598598.44	667175.99	S 12 40 20.661	E 124 32 22.066
	442.00	2.86	227.94	441.86	406.66	6.67	-6.03	-2.99	0.58	0.24	10.62	8598598.27	667175.81	S 12 40 20.667	E 124 32 22.060
	447.00	2.97	227.49	446.85	411.65	6.92	-6.20	-3.18	0.67	0.66	-2.70	8598598.10	667175.62	S 12 40 20.672	E 124 32 22.054
	452.00	3.04	227.33	451.84	416.64	7.17	-6.38	-3.37	0.42	0.42	-0.96	8598597.92	667175.43	S 12 40 20.678	E 124 32 22.047
	457.00	3.01	228.46	456.83	421.63	7.43	-6.55	-3.57	0.40	-0.18	6.78	8598597.75	667175.23	S 12 40 20.684	E 124 32 22.041
	462.00	3.07	229.50	461.83	426.63	7.68	-6.73	-3.77	0.49	0.36	6.24	8598597.57	667175.03	S 12 40 20.690	E 124 32 22.034
	467.00	3.19	230.20	466.82	431.62	7.95	-6.90	-3.98	0.76	0.72	4.20	8598597.40	667174.82	S 12 40 20.695	E 124 32 22.027
	472.00	3.27	231.36	471.81	436.61	8.22	-7.08	-4.20	0.62	0.48	6.96	8598597.22	667174.60	S 12 40 20.701	E 124 32 22.020
	477.00	3.36	232.11	476.80	441.60	8.49	-7.26	-4.42	0.60	0.54	4.50	8598597.04	667174.38	S 12 40 20.707	E 124 32 22.013
	482.00	3.37	232.54	481.80	446.60	8.77	-7.44	-4.66	0.16	0.06	2.58	8598596.86	667174.14	S 12 40 20.713	E 124 32 22.005
	487.00	3.41	232.39	486.79	451.59	9.05	-7.62	-4.89	0.25	0.24	-0.90	8598596.68	667173.91	S 12 40 20.719	E 124 32 21.997
	492.00	3.42	233.02	491.78	456.58	9.34	-7.80	-5.13	0.23	0.06	3.78	8598596.50	667173.67	S 12 40 20.725	E 124 32 21.990
	497.00	3.43	233.15	496.77	461.57	9.62	-7.98	-5.37	0.08	0.06	0.78	8598596.32	667173.43	S 12 40 20.731	E 124 32 21.982
	502.00	3.52	232.16	501.76	466.56	9.91	-8.17	-5.61	0.65	0.54	-5.94	8598596.14	667173.19	S 12 40 20.737	E 124 32 21.974
	507.00	3.57	232.04	506.75	471.55	10.20	-8.36	-5.85	0.30	0.30	-0.72	8598595.95	667172.95	S 12 40 20.743	E 124 32 21.966
	512.00	3.61	232.05	511.74	476.54	10.50	-8.55	-6.10	0.24	0.24	0.06	8598595.75	667172.70	S 12 40 20.749	E 124 32 21.958
	517.00	3.66	232.35	516.73	481.53	10.80	-8.74	-6.35	0.32	0.30	1.80	8598595.56	667172.45	S 12 40 20.756	E 124 32 21.949
	522.00	3.76	231.45	521.72	486.52	11.11	-8.94	-6.60	0.69	0.60	-5.40	8598595.36	667172.20	S 12 40 20.762	E 124 32 21.941
	527.00	3.80	230.30	526.71	491.51	11.43	-9.15	-6.86	0.96	0.84	-6.90	8598595.15	667171.94	S 12 40 20.769	E 124 32 21.932
	532.00	4.04	229.91	531.70	496.50	11.76	-9.37	-7.13	0.86	0.84	-2.34	8598594.93	667171.67	S 12 40 20.776	E 124 32 21.924
	537.00	4.16	230.33	536.68	501.48	12.10	-9.60	-7.40	0.74	0.72	2.52	8598594.70	667171.40	S 12 40 20.784	E 124 32 21.915
	542.00	4.22	229.99	541.67	506.47	12.46	-9.84	-7.68	0.39	0.36	-2.04	8598594.46	667171.12	S 12 40 20.792	E 124 32 21.905
	547.00	4.32	229.68	546.66	511.46	12.81	-10.08	-7.97	0.62	0.60	-1.86	8598594.22	667170.83	S 12 40 20.799	E 124 32 21.896
	552.00	4.39	229.75	551.64	516.44	13.18	-10.32	-8.26	0.42	0.42	0.42	8598593.98	667170.54	S 12 40 20.807	E 124 32 21.886
	557.00	4.43	230.12	556.63	521.43	13.55	-10.57	-8.55	0.29	0.24	2.22	8598593.73	667170.25	S 12 40 20.816	E 124 32 21.877
	562.00	4.48	230.41	561.61	526.41	13.92	-10.82	-8.85	0.33	0.30	1.74	8598593.48	667169.95	S 12 40 20.824	E 124 32 21.867
	567.00	4.51	230.25	566.60	531.40	14.30	-11.07	-9.15	0.20	0.18	-0.96	8598593.23	667169.65	S 12 40 20.832	E 124 32 21.857
	572.00	4.56	230.07	571.58	536.38	14.68	-11.32	-9.46	0.31	0.30	-1.08	8598592.98	667169.35	S 12 40 20.840	E 124 32 21.847
	577.00	4.61	230.34	576.57	541.37	15.06	-11.58	-9.76	0.33	0.30	1.62	8598592.72	667169.04	S 12 40 20.848	E 124 32 21.837
	582.00	4.66	230.77	581.55	546.35	15.45	-11.83	-10.07	0.37	0.30	2.58	8598592.47	667168.73	S 12 40 20.857	E 124 32 21.826
	587.00	4.67	230.95	586.53	551.33	15.84	-12.09	-10.39	0.11	0.06	1.08	8598592.21	667168.41	S 12 40 20.865	E 124 32 21.816
	592.00	4.71	231.41	591.52	556.32	16.23	-12.35	-10.71	0.33	0.24	2.76	8598591.95	667168.09	S 12 40 20.874	E 124 32 21.805
	597.00	4.76	231.22	596.50	561.30	16.63	-12.61	-11.03	0.31	0.30	-1.14	8598591.69	667167.77	S 12 40 20.882	E 124 32 21.795
	602.00	4.79	231.23	601.48	566.28	17.02	-12.87	-11.36	0.18	0.18	0.06	8598591.43	667167.45	S 12 40 20.891	E 124 32 21.784
	607.00	4.76	231.58	606.46	571.26	17.42	-13.13	-11.68	0.25	-0.18	2.10	8598591.17	667167.12	S 12 40 20.899	E 124 32 21.773
	612.00	4.80	231.59	611.45	576.25	17.82	-13.38	-12.01	0.24	0.24	0.06	8598590.92	667166.79	S 12 40 20.908	E 124 32 21.763
	617.00	4.84	231.19	616.43	581.23	18.22	-13.65	-12.34	0.31	0.24	-2.40	8598590.65	667166.47	S 12 40 20.916	E 124 32 21.752
	622.00	4.94	230.95	621.41	586.21	18.63	-13.91	-12.67	0.61	0.60	-1.44	8598590.39	667166.13	S 12 40 20.925	E 124 32 21.741
	627.00	4.95	230.77	626.39	591.19	19.04	-14.19	-13.00	0.11	0.06	-1.08	8598590.11	667165.80	S 12 40 20.934	E 124 32 21.730
	632.00	5.00	230.36	631.37	596.17	19.46	-14.46	-13.34	0.37	0.30	-2.46	8598589.84	667165.47	S 12 40 20.943	E 124 32 21.719
	637.00	5.10	230.06	636.35	601.15	19.88	-14.74	-13.67	0.62	0.60	-1.80	8598589.56	667165.13	S 12 40 20.952	E 124 32 21.708
	642.00	5.19	229.47	641.33	606.13	20.31	-15.03	-14.02	0.63	0.54	-3.54	8598589.27	667164.78	S 12 40 20.962	E 124 32 21.696
	647.00	5.19	229.52	646.31	611.11	20.75	-15.33	-14.36	0.03	0.00	0.30	8598589.00	667164.44	S 12 40 20.971	E 124 32 21.685
	652.00	5.22	229.18	651.29	616.09	21.19	-15.62	-14.70	0.26	0.18	-2.04	8598588.73	667164.10	S 12 40 20.981	E 124 32 21.674
	657.00	5.23	229.28	656.27	621.07	21.63	-15.92	-15.05	0.08	0.06	0.60	8598588.46	667163.75	S 12 40 20.991	E 124 32 21.662
	662.00	5.28	229.48	661.25	626.05	22.07	-16.22	-15.40	0.32	0.30	1.20	8598588.18	667163.40	S 12 40 21.001	E 124 32 21.651
	667.00	5.38	229.63	666.23	631.03	22.52	-16.52	-15.75	0.61	0.60	0.90	8598587.78	667163.05	S 12 40 21.011	E 124 32 21.639
	672.00	5.34	229.50	671.21	636.01	22.97	-16.82	-16.11	0.25	-0.24	-0.78	8598587.48	667162.70	S 12 40 21.020	E 124 32 21.627
	677.00	5.27	229.39	676.19	640.99	23.41	-17.12	-16.46	0.42	-0.42	-0.66	8598587.18	667162.34	S 12 40 21.030	E 124 32 21.616
	682.00	5.32	229.33	681.16	645.96	23.86	-17.42	-16.81	0.30	0.30	-0.36	8598586.88	667161.99	S 12 40 21.040	E 124 32 21.604
	687.00	5.39	229.52	686.14	650.94	24.31	-17.73	-17.16	0.43	0.42	1.14	8598586.57	667161.64	S 12 40 21.050	E 124 32 21.593
	692.00	5.39	229.39	691.12	655.92	24.76	-18.03	-17.52	0.07	0.00	-0.78	8598586.27	667161.28	S 12 40 21.060	E 124 32 21.581
	697.00	5.41	229.40	696.10	660.90	25.22	-18.34	-17.88	0.12	0.12	0.06	8598585.96	667160.93	S 12 40 21.070	E 124 32 21.569
	702.00	5.47	229.24	701.08	665.88	25.67	-18.65	-18.24	0.37	0.36	-0.96	8598585.65	667160.57	S 12 40 21.080	E 124 32 21.557
	707.00	5.52	229.24	706.05	670.85	26.14	-18.96	-18.60	0.30	0.30	0.00	8598585.34	667160.20	S 12 40 21.091	E 124 32 21.545
	712.00	5.65	228.17	711.03	675.83	26.61	-19.28	-18.97	0.78	0.78	-0.42	8598585.02	667159.84	S 12 40 21.101	E 124 32 21.533
	717.00	5.47	230.20	716.01	680.81	27.07	-19.59	-19.34	1.23	-1.08	6.18	8598584.71	667159.47	S 12 40 21.111	E 124 32 21.521
	722.00	5.47	229.69	720.98	685.78	27.53	-19.90	-19.70	0.29	0.00	-3.06	8598584.40	667159.10	S 12 40 21.121	E 124 32 21.509
	727.00	5.37	230.18	725.96	690.76	27.99	-20.20	-20.06	0.66	-0.60	2.94	8598584.10	667158.74	S 12 40 21.131	E 124 32 21.497
	732.00	5.34	230.36	730.94	695.74	28.43	-20.50	-20.42	0.21	-0.18	1.08	8598583.80	667158.38	S 12 40 21.141	E 124 32 21.485
	737.00	5.34	230.07	735.92	700.72	28.88	-20.80	-20.78	0.16	0.00	-1.74	8598583.50	667158.02	S 12 40 21.151	E 124 32 21.473
	742.00	5.29	230.34	740.90	705.70	29.33	-21.10	-21.13	0.34	-0.30	1.62	8598583.21	667157.67	S 12 40 21.160	E 124 32 21.462
	747.00	5.28	230.81	745.87	710.67	29.77	-21.39	-21.49	0.27	-0.06	2.82	8598582.91	667157.31	S 12 40 21.170	E 124 32 21.450
	752.00	5.32	230.61	750.85	715.65	30.21	-21.68	-21.85	0.26	0.24	-1.20	8598582.62			



Comments	Measured Depth (m)	Inclination (deg)	Azimuth Grid (deg)	TVD (m)	Sub-Sea TVD (m)	Vertical Section (m)	NS Grid North (m)	EW Grid North (m)	DLS (deg/30m)	Build Rate (deg/30m)	Walk Rate (deg/30m)	Northing (m)	Easting (m)	Latitude	Longitude
	857.00	5.37	229.34	855.42	820.22	39.36	-27.79	-29.13	0.11	0.00	1.20	8598576.51	667149.67	S 12 40 21.380	E 124 32 21.198
	862.00	5.30	229.87	860.40	825.20	39.81	-28.09	-29.49	0.51	-0.42	3.18	8598576.21	667149.31	S 12 40 21.390	E 124 32 21.186
	867.00	5.35	229.68	865.38	830.18	40.26	-28.39	-29.84	0.32	0.30	-1.14	8598575.91	667148.96	S 12 40 21.400	E 124 32 21.175
	872.00	5.40	229.15	870.36	835.16	40.71	-28.70	-30.20	0.42	0.30	-3.18	8598575.60	667148.60	S 12 40 21.410	E 124 32 21.163
	877.00	5.45	229.21	875.33	840.13	41.17	-29.01	-30.56	0.30	0.30	0.36	8598575.29	667148.25	S 12 40 21.420	E 124 32 21.151
	882.00	5.47	229.78	880.31	845.11	41.63	-29.32	-30.92	0.35	0.12	3.42	8598574.98	667147.88	S 12 40 21.430	E 124 32 21.139
	887.00	5.48	229.92	885.28	850.09	42.09	-29.62	-31.28	0.10	0.06	0.84	8598574.68	667147.52	S 12 40 21.440	E 124 32 21.127
	892.00	5.46	229.39	890.27	855.07	42.54	-29.93	-31.65	0.33	-0.12	-3.18	8598574.37	667147.16	S 12 40 21.450	E 124 32 21.115
	897.00	5.49	228.90	895.24	860.04	43.01	-30.25	-32.01	0.33	0.18	-2.94	8598574.06	667146.80	S 12 40 21.460	E 124 32 21.103
	902.00	5.56	228.98	900.22	865.02	43.47	-30.56	-32.37	0.42	0.42	0.48	8598573.74	667146.43	S 12 40 21.471	E 124 32 21.091
	907.00	5.59	229.83	905.20	870.00	43.94	-30.88	-32.74	0.53	0.18	5.10	8598573.42	667146.06	S 12 40 21.481	E 124 32 21.079
	912.00	5.52	230.47	910.17	874.97	44.40	-31.19	-33.11	0.56	-0.42	3.84	8598573.11	667145.69	S 12 40 21.491	E 124 32 21.067
	917.00	5.54	231.23	915.15	879.95	44.87	-31.49	-33.48	0.46	0.12	4.56	8598572.81	667145.32	S 12 40 21.501	E 124 32 21.054
	922.00	5.42	232.49	920.13	884.93	45.32	-31.79	-33.86	1.02	-0.72	7.56	8598572.51	667144.94	S 12 40 21.511	E 124 32 21.042
	927.00	5.20	233.85	925.10	889.90	45.76	-32.06	-34.23	1.52	-1.32	8.16	8598572.24	667144.57	S 12 40 21.520	E 124 32 21.030
	932.00	5.02	234.83	930.08	894.88	46.18	-32.32	-34.59	1.20	-1.08	5.88	8598571.98	667144.21	S 12 40 21.528	E 124 32 21.018
	937.00	5.00	235.61	935.07	899.87	46.58	-32.57	-34.95	0.43	-0.12	4.68	8598571.73	667143.85	S 12 40 21.537	E 124 32 21.006
	942.00	5.02	237.21	940.05	904.85	46.99	-32.81	-35.31	0.65	0.12	9.60	8598571.49	667143.49	S 12 40 21.545	E 124 32 20.994
	947.00	5.04	238.24	945.03	909.83	47.39	-33.05	-35.68	0.55	0.12	6.18	8598571.25	667143.12	S 12 40 21.552	E 124 32 20.982
	952.00	5.08	238.09	950.01	914.81	47.79	-33.28	-36.06	0.25	0.24	-0.90	8598571.02	667142.74	S 12 40 21.560	E 124 32 20.969
	957.00	5.15	238.31	954.99	919.79	48.20	-33.52	-36.44	0.44	0.42	1.32	8598570.79	667142.37	S 12 40 21.568	E 124 32 20.957
	962.00	5.28	238.09	959.97	924.77	48.62	-33.76	-36.82	0.79	0.78	-1.32	8598570.55	667141.99	S 12 40 21.575	E 124 32 20.944
	967.00	5.22	238.82	964.95	929.75	49.03	-34.00	-37.21	0.54	-0.36	4.38	8598570.31	667141.59	S 12 40 21.583	E 124 32 20.931
	972.00	5.09	239.28	969.93	934.73	49.44	-34.23	-37.60	0.82	-0.78	2.76	8598570.08	667141.20	S 12 40 21.591	E 124 32 20.919
	977.00	5.07	239.31	974.91	939.71	49.84	-34.45	-37.98	0.12	-0.12	0.18	8598569.85	667140.82	S 12 40 21.598	E 124 32 20.906
	982.00	5.15	238.55	979.89	944.69	50.25	-34.68	-38.36	0.63	0.48	-4.56	8598569.62	667140.44	S 12 40 21.606	E 124 32 20.893
	987.00	5.07	238.44	984.87	949.67	50.65	-34.91	-38.74	0.48	-0.48	-0.66	8598569.39	667140.06	S 12 40 21.614	E 124 32 20.881
	992.00	5.02	238.69	989.85	954.65	51.05	-35.14	-39.12	0.33	-0.30	1.50	8598569.16	667139.69	S 12 40 21.621	E 124 32 20.869
	997.00	5.03	238.91	994.83	959.63	51.45	-35.37	-39.49	0.13	0.06	1.32	8598568.93	667139.31	S 12 40 21.629	E 124 32 20.856
	1002.00	5.00	238.80	999.81	964.61	51.85	-35.60	-39.86	0.19	-0.18	-0.66	8598568.70	667138.94	S 12 40 21.636	E 124 32 20.844
	1007.00	4.96	238.08	1004.79	969.59	52.24	-35.82	-40.23	0.45	-0.24	-4.32	8598568.48	667138.57	S 12 40 21.643	E 124 32 20.832
	1012.00	4.91	237.59	1009.77	974.57	52.64	-36.05	-40.60	0.39	-0.30	-2.94	8598568.25	667138.20	S 12 40 21.651	E 124 32 20.820
	1017.00	4.90	237.36	1014.75	979.55	53.03	-36.28	-40.96	0.13	-0.06	-1.38	8598568.02	667137.84	S 12 40 21.658	E 124 32 20.808
	1022.00	4.94	237.08	1019.73	984.53	53.43	-36.52	-41.32	0.28	0.24	-1.68	8598567.79	667137.48	S 12 40 21.666	E 124 32 20.796
	1027.00	5.04	236.58	1024.72	989.52	53.83	-36.75	-41.68	0.65	0.60	-3.00	8598567.55	667137.12	S 12 40 21.674	E 124 32 20.784
	1032.00	5.07	236.32	1029.70	994.50	54.23	-37.00	-42.05	0.23	0.18	-1.56	8598567.31	667136.75	S 12 40 21.682	E 124 32 20.772
	1037.00	5.04	236.48	1034.68	999.48	54.64	-37.24	-42.42	0.20	-0.18	0.96	8598567.06	667136.39	S 12 40 21.690	E 124 32 20.760
	1042.00	4.98	236.98	1039.66	1004.46	55.05	-37.48	-42.78	0.45	-0.36	3.00	8598566.82	667136.02	S 12 40 21.698	E 124 32 20.747
	1047.00	4.95	236.55	1044.64	1009.44	55.45	-37.72	-43.14	0.29	-0.18	-2.58	8598566.58	667135.66	S 12 40 21.706	E 124 32 20.736
	1052.00	4.97	236.47	1049.62	1014.42	55.85	-37.96	-43.50	0.13	0.12	-0.48	8598566.35	667135.30	S 12 40 21.713	E 124 32 20.724
	1057.00	5.04	236.99	1054.60	1019.40	56.25	-38.19	-43.87	0.50	0.42	3.12	8598566.11	667134.93	S 12 40 21.721	E 124 32 20.712
	1062.00	5.04	237.84	1059.58	1024.38	56.65	-38.43	-44.24	0.45	0.00	5.10	8598565.87	667134.56	S 12 40 21.729	E 124 32 20.699
	1067.00	5.06	238.07	1064.56	1029.36	57.06	-38.67	-44.61	0.17	0.12	1.38	8598565.64	667134.19	S 12 40 21.737	E 124 32 20.687
	1072.00	5.06	238.76	1069.54	1034.34	57.46	-38.90	-44.99	0.37	0.00	4.14	8598565.41	667133.81	S 12 40 21.744	E 124 32 20.675
	1077.00	5.11	239.00	1074.52	1039.32	57.86	-39.13	-45.37	0.33	0.30	1.44	8598565.18	667133.44	S 12 40 21.752	E 124 32 20.662
	1082.00	5.06	239.32	1079.50	1044.30	58.26	-39.35	-45.75	0.34	-0.30	1.92	8598564.95	667133.07	S 12 40 21.759	E 124 32 20.650
	1087.00	5.00	239.51	1084.48	1049.28	58.66	-39.58	-46.13	0.37	-0.36	1.14	8598564.73	667132.68	S 12 40 21.767	E 124 32 20.637
	1092.00	4.62	242.18	1089.47	1054.27	59.03	-39.78	-46.49	2.65	-2.28	16.02	8598564.52	667132.31	S 12 40 21.773	E 124 32 20.625
	1097.00	4.37	244.78	1094.45	1059.25	59.37	-39.95	-46.84	1.93	-1.50	15.60	8598564.35	667131.96	S 12 40 21.779	E 124 32 20.613
	1102.00	4.16	246.16	1099.44	1064.24	59.69	-40.11	-47.18	1.40	-1.26	8.28	8598564.19	667131.62	S 12 40 21.784	E 124 32 20.602
	1107.00	4.16	244.06	1104.42	1069.22	60.00	-40.26	-47.51	0.91	0.00	-12.60	8598564.04	667131.29	S 12 40 21.789	E 124 32 20.591
	1112.00	4.02	243.03	1109.41	1074.21	60.31	-40.42	-47.83	0.95	-0.84	-6.18	8598563.88	667130.97	S 12 40 21.794	E 124 32 20.581
	1117.00	3.93	239.36	1114.40	1079.20	60.62	-40.59	-48.13	1.62	-0.54	-22.02	8598563.71	667130.66	S 12 40 21.800	E 124 32 20.571
	1117.00	3.93	239.17	1114.60	1079.40	60.64	-40.59	-48.14	1.95	0.00	-28.51	8598563.54	667130.35	S 12 40 21.806	E 124 32 20.560
	1153.25	2.73	258.88	1150.59	1115.39	62.37	-41.39	-50.05	1.37	-1.00	16.40	8598562.91	667128.76	S 12 40 21.827	E 124 32 20.507
	1173.34	2.27	259.51	1170.66	1135.46	62.99	-41.56	-50.91	0.69	-0.69	0.94	8598562.74	667127.90	S 12 40 21.832	E 124 32 20.479
	1202.94	2.31	256.88	1200.24	1165.04	63.84	-41.80	-52.07	0.11	0.04	-2.67	8598562.50	667126.74	S 12 40 21.840	E 124 32 20.441
	1232.16	2.43	261.03	1229.43	1194.23	64.69	-42.03	-53.25	0.21	0.12	4.26	8598562.27	667125.55	S 12 40 21.848	E 124 32 20.401
	1262.13	2.32	260.96	1259.38	1224.18	65.54	-42.22	-54.48	0.11	-0.11	-0.07	8598562.08	667124.33	S 12 40 21.854	E 124 32 20.361
	1290.94	2.95	254.10	1288.15	1252.95	66.51	-42.52	-55.77	0.73	0.66	-7.14	8598561.78	667123.04	S 12 40 21.864	E 124 32 20.318
	1300.06	3.37	251.55	1297.26	1262.06	66.91	-42.67	-56.25	1.46	1.38	-8.39	8598561.63	667122.56	S 12 40 21.869	E 124 32 20.302
	1319.17	4.24	249.65	1316.33	1281.13	67.93	-43.09	-57.44	1.38	1.37	-2.98	8598561.21	667121.36	S 12 40 21.883	E 124 32 20.263
	1349.22	5.25	243.20	1346.28	1311.08	70.03	-44.10	-59.71	1.14	1.01	-6.44	8598560.20	667119.09	S 12 40 21.916	E 124 32 20.188
	1377.86	7.00	236.08	1374.75	1339.55	72.80	-45.66	-62.33	1.99	1.83	-7.46	8598558.64	667116.48	S 12 40 21.968	E 124 32 20.101
	1407.09	8.83	224.79	1403.70	1368.50	76.66	-48.25	-65.39	2.46	1.88	-11.59				



Comments	Measured Depth (m)	Inclination (deg)	Azimuth Grid (deg)	TVD (m)	Sub-Sea TVD (m)	Vertical Section (m)	NS Grid North (m)	EW Grid North (m)	DLS (deg/30 m)	Build Rate (deg/30 m)	Walk Rate (deg/30 m)	Northing (m)	Easting (m)	Latitude	Longitude
	2064.78	23.88	212.23	2031.74	1996.54	262.22	-192.92	-182.65	2.05	0.35	5.02	8598411.39	666996.16	S 12 40 26.783	E 124 32 16.143
	2093.83	24.87	216.35	2058.20	2023.00	274.20	-202.81	-189.40	2.03	1.02	4.25	8598401.50	666989.41	S 12 40 27.106	E 124 32 15.921
	2101.81	24.77	216.63	2065.45	2030.25	277.55	-205.51	-191.40	0.58	-0.38	1.05	8598398.80	666987.42	S 12 40 27.194	E 124 32 15.855
	2131.34	27.47	219.69	2091.96	2056.76	290.51	-215.71	-199.44	3.06	2.74	3.11	8598388.60	666979.37	S 12 40 27.528	E 124 32 15.591
	2160.06	32.43	219.28	2116.84	2081.64	304.79	-226.78	-208.55	5.19	5.18	-0.43	8598377.53	666970.26	S 12 40 27.890	E 124 32 15.291
	2189.87	35.01	219.95	2141.63	2106.43	321.26	-239.52	-219.10	2.62	2.60	0.67	8598364.79	666959.71	S 12 40 28.306	E 124 32 14.943
	2219.50	36.31	220.07	2165.70	2130.50	338.44	-252.75	-230.21	1.32	1.32	0.12	8598351.56	666948.60	S 12 40 28.739	E 124 32 14.578
	2249.61	37.94	220.59	2189.71	2154.51	356.51	-266.61	-241.97	1.65	1.62	0.52	8598337.71	666936.84	S 12 40 29.192	E 124 32 14.191
	2279.05	39.86	220.60	2212.62	2177.42	374.88	-280.64	-254.00	1.96	1.96	0.01	8598323.67	666924.81	S 12 40 29.651	E 124 32 13.795
	2307.64	40.02	220.68	2234.54	2199.34	393.12	-294.57	-265.95	0.18	0.17	0.08	8598309.74	666912.86	S 12 40 30.107	E 124 32 13.401
	2337.48	41.94	220.81	2257.07	2221.87	412.56	-309.40	-278.73	1.93	1.93	0.13	8598294.92	666900.09	S 12 40 30.591	E 124 32 12.981
	2365.56	42.32	219.73	2277.89	2242.69	431.29	-323.77	-290.90	0.87	0.41	-1.15	8598280.55	666887.91	S 12 40 31.061	E 124 32 12.580
	2395.92	43.04	219.13	2300.21	2265.01	451.79	-339.67	-303.97	0.82	0.71	-0.59	8598264.65	666874.84	S 12 40 31.581	E 124 32 12.150
	2425.36	44.54	218.39	2321.46	2286.26	472.10	-355.55	-316.73	1.62	1.53	-0.75	8598248.77	666862.09	S 12 40 32.101	E 124 32 11.731
	2455.04	46.96	218.42	2342.17	2306.97	493.30	-372.21	-329.93	2.45	2.45	0.03	8598232.11	666848.89	S 12 40 32.645	E 124 32 11.296
	2484.32	50.15	217.56	2361.55	2326.35	515.19	-389.51	-343.44	3.33	3.27	-0.88	8598214.81	666835.38	S 12 40 33.211	E 124 32 10.852
	2514.30	53.64	216.69	2380.05	2344.85	538.75	-408.32	-357.67	3.56	3.49	-0.87	8598196.00	666821.15	S 12 40 33.826	E 124 32 10.384
	2543.93	54.60	216.74	2397.41	2362.21	562.73	-427.56	-372.02	0.97	0.97	0.05	8598176.76	666806.80	S 12 40 34.455	E 124 32 9.912
	2573.52	56.69	215.96	2414.11	2378.91	587.14	-447.24	-386.50	2.22	2.12	-0.79	8598157.09	666792.32	S 12 40 35.098	E 124 32 9.436
	2601.30	59.25	215.44	2428.84	2393.64	610.68	-466.36	-400.24	2.81	2.76	-0.56	8598137.96	666778.58	S 12 40 35.723	E 124 32 8.985
	2631.11	59.15	214.87	2444.11	2408.91	636.29	-487.30	-414.98	0.50	-0.10	-0.57	8598117.03	666763.84	S 12 40 36.407	E 124 32 8.500
	2660.05	58.98	214.39	2458.98	2423.78	661.11	-507.72	-429.09	0.46	-0.18	-0.50	8598096.61	666749.74	S 12 40 37.074	E 124 32 8.037
	2689.38	59.74	213.85	2473.93	2438.73	686.34	-528.61	-443.24	0.91	0.78	-0.55	8598075.72	666735.58	S 12 40 37.756	E 124 32 7.572
	2719.00	61.64	213.53	2488.43	2453.23	712.17	-550.10	-457.57	1.95	1.92	-0.32	8598054.23	666721.26	S 12 40 38.459	E 124 32 7.101
	2748.49	63.11	213.17	2502.10	2466.90	738.29	-571.93	-471.93	1.53	1.50	-0.37	8598032.40	666706.90	S 12 40 39.171	E 124 32 6.629
	2777.87	62.19	212.28	2515.60	2480.40	764.38	-593.88	-486.04	1.24	-0.94	-0.91	8598010.45	666692.79	S 12 40 39.889	E 124 32 6.166
	2807.15	62.73	212.37	2529.14	2493.94	790.33	-615.82	-499.92	0.56	0.55	0.09	8597986.51	666678.91	S 12 40 40.605	E 124 32 5.700
	2836.31	63.91	212.35	2542.23	2507.03	816.37	-637.83	-513.87	1.21	1.21	-0.02	8597966.51	666664.96	S 12 40 41.324	E 124 32 5.252
	2865.80	65.36	212.69	2554.87	2519.67	843.01	-660.30	-528.19	1.51	1.48	0.35	8597944.04	666650.64	S 12 40 42.058	E 124 32 4.782
	2895.35	66.73	212.54	2566.86	2531.66	870.00	-683.04	-542.75	1.40	1.39	-0.15	8597921.30	666636.08	S 12 40 42.801	E 124 32 4.304
	2924.77	67.86	212.92	2578.22	2543.02	897.13	-705.87	-557.42	1.21	1.15	0.39	8597898.47	666621.41	S 12 40 43.547	E 124 32 3.822
	2954.69	69.36	213.71	2589.13	2553.93	924.98	-729.15	-572.72	1.68	1.50	0.79	8597875.19	666606.11	S 12 40 44.307	E 124 32 3.319
	2984.05	71.53	215.24	2598.96	2563.76	952.65	-751.96	-588.38	2.66	2.22	1.56	8597852.39	666590.45	S 12 40 45.052	E 124 32 2.805
	3013.54	74.26	215.24	2607.63	2572.43	980.83	-774.97	-604.65	2.78	2.78	0.00	8597829.37	666574.19	S 12 40 45.804	E 124 32 2.270
	3042.67	76.80	215.22	2614.91	2579.71	1009.03	-798.01	-620.91	2.62	2.62	-0.02	8597806.33	666557.92	S 12 40 46.557	E 124 32 1.736
	3072.12	79.09	215.12	2621.06	2585.86	1037.82	-821.55	-637.50	2.33	2.33	-0.10	8597782.79	666541.33	S 12 40 47.326	E 124 32 1.191
	3101.41	81.33	214.29	2626.04	2590.84	1066.68	-845.28	-653.93	2.44	2.29	-0.85	8597759.07	666524.90	S 12 40 48.101	E 124 32 0.651
	3131.43	82.11	213.78	2630.36	2595.16	1096.39	-869.90	-670.56	0.93	0.78	-0.51	8597734.45	666508.28	S 12 40 48.906	E 124 32 0.104
	3161.29	82.61	213.22	2634.33	2599.13	1125.98	-894.58	-686.90	0.75	0.50	-0.56	8597709.77	666491.94	S 12 40 49.712	E 124 31 59.568
	3190.52	82.89	213.74	2638.02	2602.82	1154.97	-918.76	-702.89	0.60	0.29	0.53	8597685.59	666475.95	S 12 40 50.502	E 124 31 59.042
	3222.38	83.12	213.35	2641.90	2606.70	1186.59	-945.12	-720.37	0.42	0.22	-0.37	8597659.23	666458.47	S 12 40 51.363	E 124 31 58.468
	3251.25	84.13	211.61	2645.11	2609.91	1215.27	-969.32	-735.77	2.08	1.05	-1.81	8597635.03	666443.07	S 12 40 52.154	E 124 31 57.962
	3279.81	85.17	209.57	2647.77	2612.57	1243.65	-993.80	-750.24	2.40	1.09	-2.14	8597610.56	666428.60	S 12 40 52.953	E 124 31 57.488
	3309.82	86.72	208.20	2649.89	2614.69	1273.45	-1020.01	-764.70	2.07	1.55	-1.37	8597584.35	666414.14	S 12 40 53.808	E 124 31 57.014
	3339.86	88.07	206.26	2651.26	2616.06	1303.24	-1046.69	-778.43	2.36	1.35	-1.94	8597557.67	666400.41	S 12 40 54.679	E 124 31 56.564
	3370.14	88.65	205.53	2652.12	2616.92	1333.19	-1073.92	-791.65	0.92	0.57	-0.72	8597530.44	666387.19	S 12 40 55.568	E 124 31 56.131
	3391.01	89.19	205.17	2652.52	2617.32	1353.81	-1092.77	-800.58	0.93	0.78	-0.52	8597511.59	666378.26	S 12 40 56.183	E 124 31 55.839
	3400.49	89.48	204.99	2652.63	2617.43	1363.16	-1101.36	-804.60	1.08	0.92	-0.57	8597503.00	666374.24	S 12 40 56.463	E 124 31 55.707
	3430.12	89.60	204.38	2652.87	2617.67	1392.39	-1128.28	-816.97	0.63	0.12	-0.62	8597476.08	666361.87	S 12 40 57.342	E 124 31 55.302
	3458.10	89.71	203.64	2653.03	2617.83	1419.92	-1153.84	-828.36	0.80	0.12	-0.79	8597450.52	666350.49	S 12 40 58.176	E 124 31 54.930
	3487.23	89.89	203.68	2653.14	2617.94	1448.56	-1180.52	-840.05	0.19	0.19	0.04	8597423.84	666338.80	S 12 40 59.046	E 124 31 54.548
	3516.83	89.89	203.10	2653.19	2617.99	1477.64	-1207.69	-851.80	0.59	0.00	-0.59	8597396.68	666327.05	S 12 40 59.932	E 124 31 54.163
	3546.54	89.83	202.80	2653.27	2618.07	1506.78	-1235.05	-863.38	0.31	-0.06	-0.30	8597369.32	666315.46	S 12 41 0.825	E 124 31 53.785
	3576.15	89.54	203.32	2653.43	2618.23	1535.83	-1262.29	-874.98	0.60	-0.29	0.53	8597342.08	666303.87	S 12 41 1.714	E 124 31 53.406
	3605.20	89.48	204.89	2653.68	2618.48	1564.43	-1288.80	-886.85	1.62	-0.06	1.62	8597315.57	666292.00	S 12 41 2.579	E 124 31 53.018
	3634.98	89.48	206.06	2653.95	2618.75	1593.86	-1315.69	-899.65	1.18	0.00	1.18	8597288.68	666279.20	S 12 41 3.456	E 124 31 52.598
	3664.20	89.80	207.54	2654.14	2618.94	1623.83	-1342.66	-913.28	1.50	0.32	1.47	8597261.71	666265.57	S 12 41 4.336	E 124 31 52.152
	3694.63	89.86	211.69	2654.22	2619.02	1653.16	-1368.24	-927.82	4.23	0.06	4.23	8597236.13	666251.03	S 12 41 5.171	E 124 31 51.705
	3722.38	90.32	214.87	2654.18	2618.98	1680.90	-1391.43	-943.04	3.47	0.50	3.44	8597212.94	666235.81	S 12 41 5.929	E 124 31 51.275
	3752.47	90.32	216.42	2654.01	2618.81	1710.98	-1415.89	-960.58	1.55	0.00	1.55	8597188.49	666218.27	S 12 41 6.728	E 124 31 50.849
Last Survey	3776.37	90.03	218.37	2653.94	2618.74	1734.84	-1434.87	-975.09	2.47	-0.36	2.45	8597169.50	666203.76	S 12 41 7.349	E 124 31 50.421

Survey Type: Definitive Survey

Survey Error Model: SLB ISCWSA version 24 *** 1-D 95.00% Confidence 1.9600 sigma

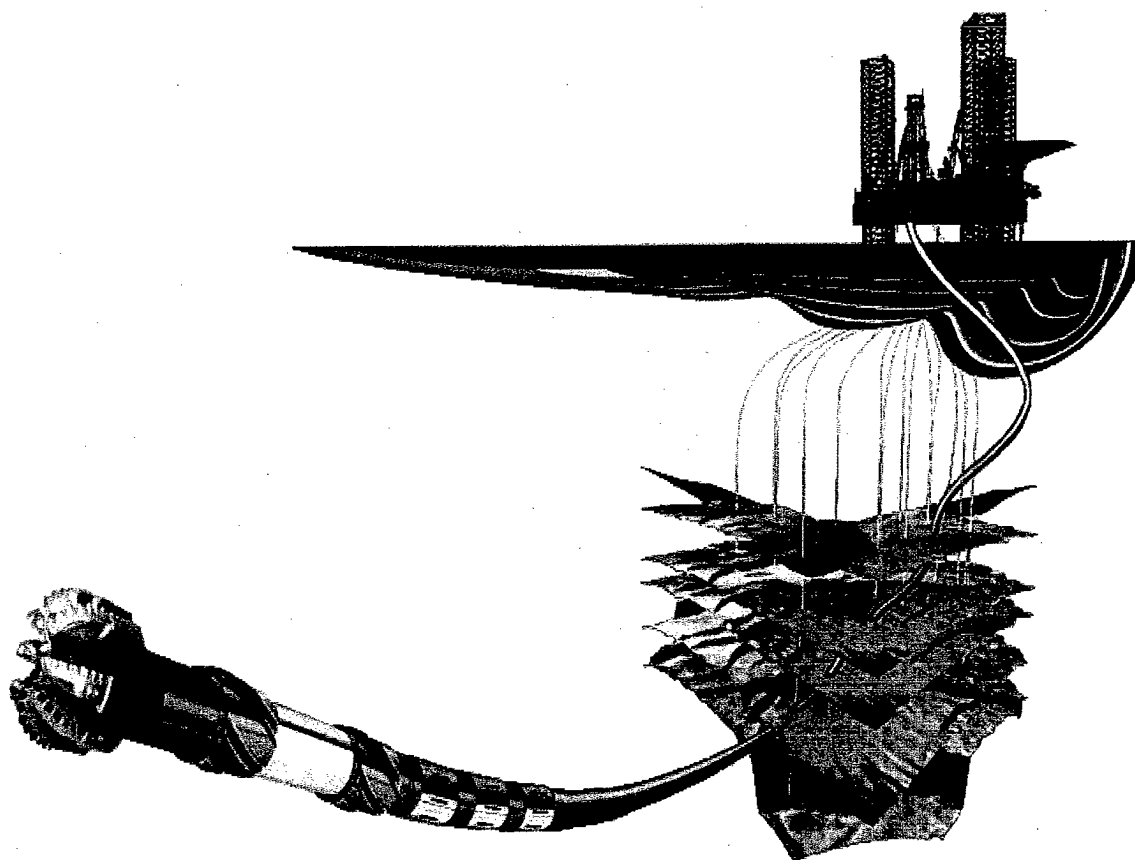
Surveying Prog:

MD From (m)	MD To (m)	EQU	Frag	Survey Tool Type	Borehole -> Survey
0.00	112.70	Act-Stns	SLB	NSG+BATTERY-Depth Only	Montara H1 -> Montara H1 Gyro Survey-1117.2m
112.7					



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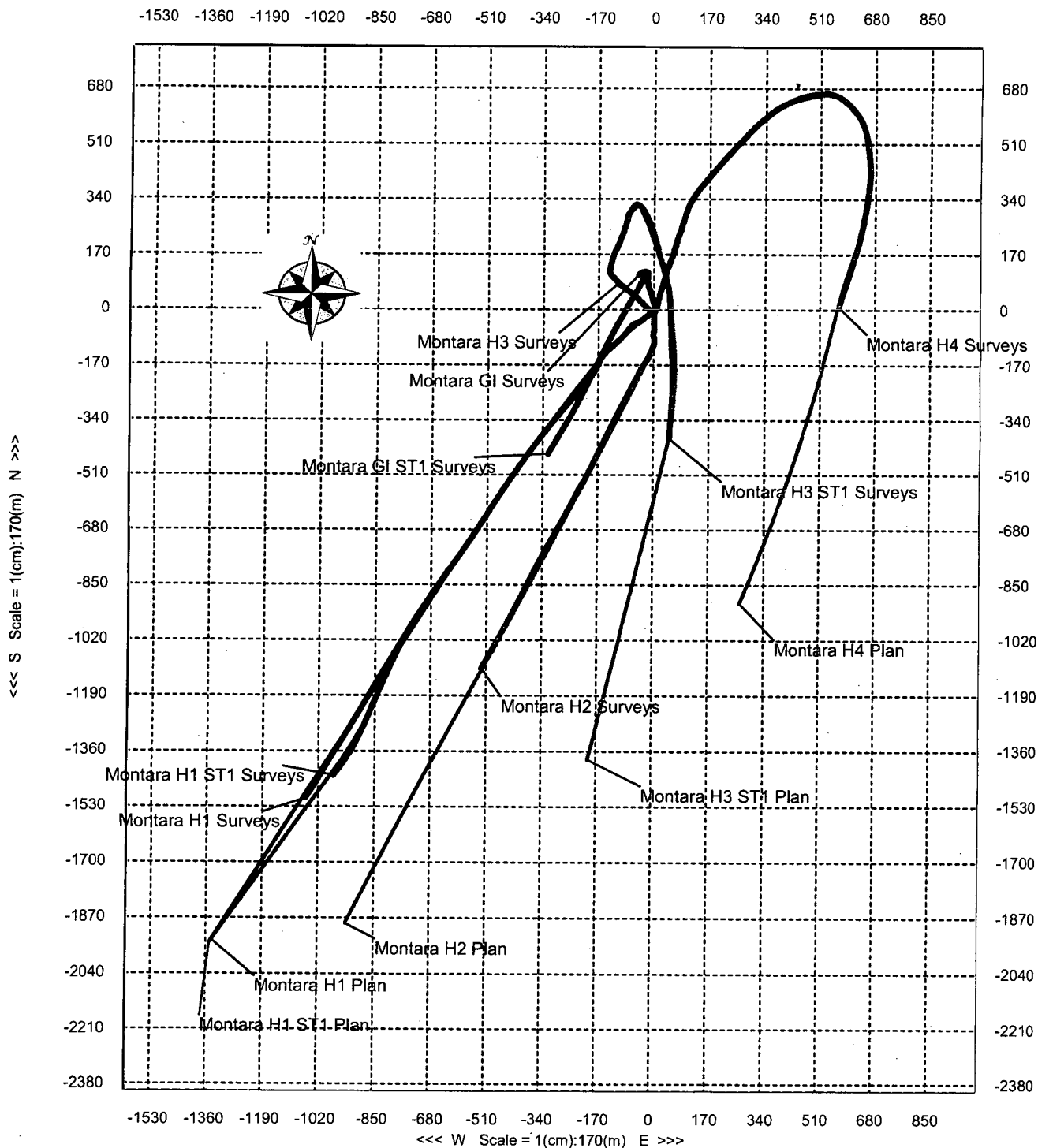
4. Well Plot





Montara Platform Overview

WELL Montara H1 & ST1		FIELD PTTEP/ACRL-3/Montara		STRUCTURE Montara	
Magnetic Parameters Mode: BGM 2008 Dip: -40.569° Mag Dec: +2.467°		Date: March 04 2009 FS: 46854.9 nT	Surface Location Lat: 512 40 20.470 Lon: E124 32 22.158		GDAS94/MGARA Zone 51 Northing: 8588604.20 m Easting: 867178.80 m Grid Conv: -0.337804811 Scale Factor: 9999457651
				Miscellaneous Slot: Montara H1 Plan: Montara H1 ST1 Actual Survey Date: March 04, 2009 TVD Ref: RT (35.20 m above AHD)	



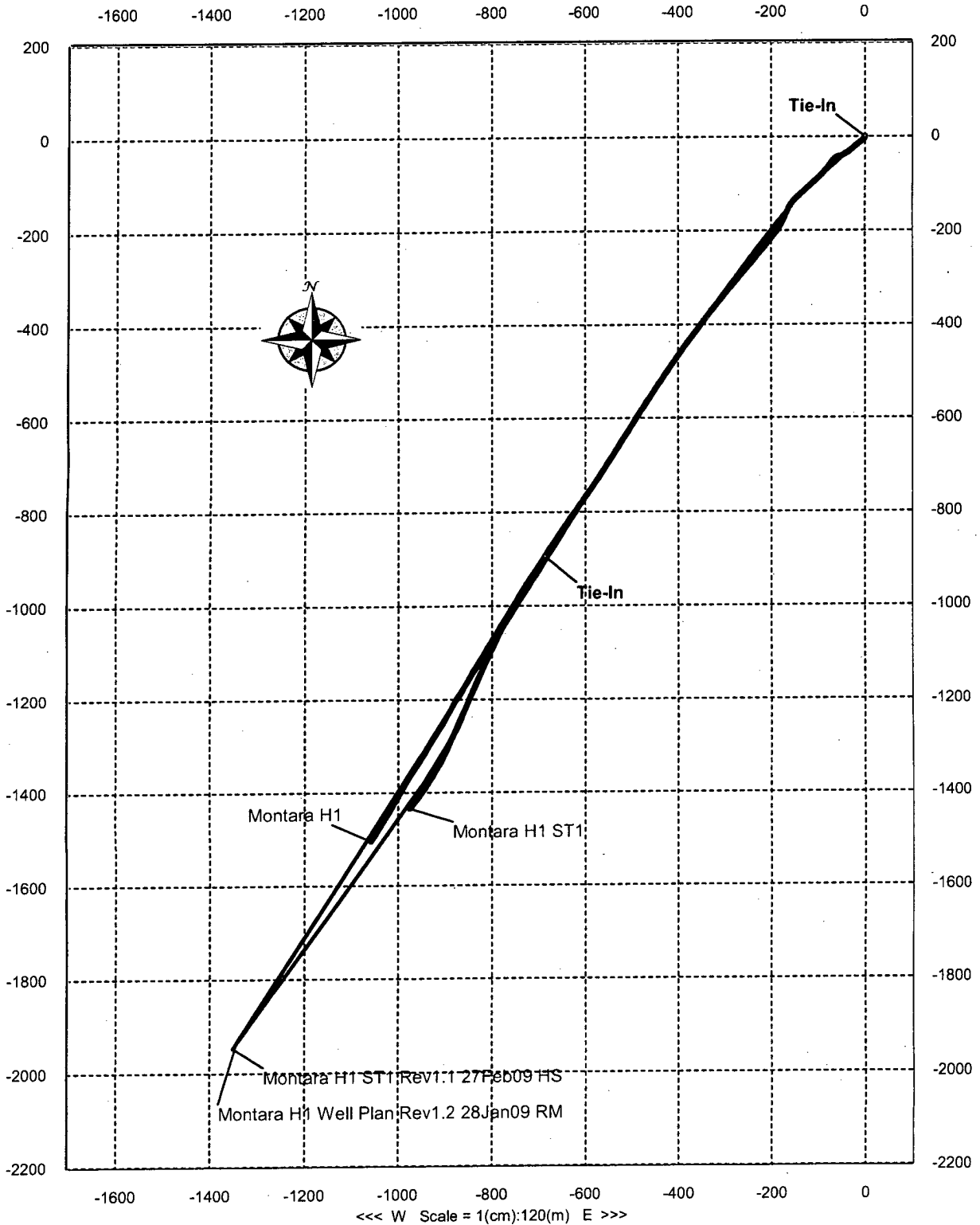


PTTEP Australasia

WELL	Montara H1 & H1 ST1	FIELD	PTTEP/ACRL-3/Montara	STRUCTURE	Montara
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Magnetic Parameters Model: BGGM 2008 Dp: -40 569' Mag Dec: +2.467'	Date: March 04, 2009 FS: 46854.8 nT	Surface Location Lat: S12 40 20.470 Lon: E124 32 22.158	GDAM/MGSM Zone 51 Northing: 8598604.30 m Easting: 867178.80 m Grid Conv: -0.33780481' Scale Fact: 0.9999457651	Miscellaneous Slot: Montara H1 Plan: Montara H1 ST1 Actual Survey Date: March 04, 2009	TVD Ref: RT (35.20 m above AHD)
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Scale = 1(cm):120(m) N >>>





SCD.0001.0021.2115

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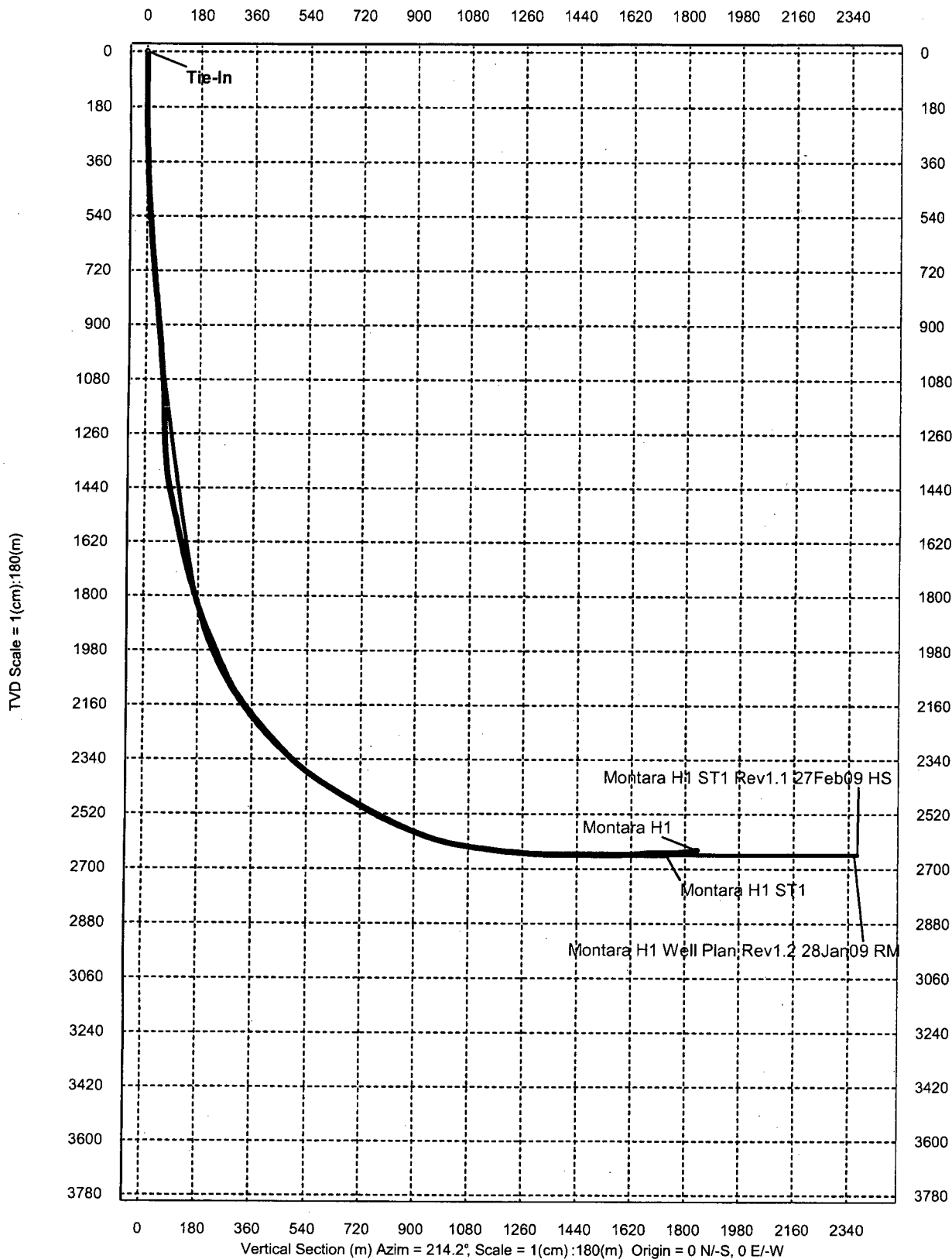
PTTEP



PTTEP Australasia

WELL	Montara H1 & H1 ST1	FIELD	PTTEP/ACRL-3/Montara	STRUCTURE	Montara
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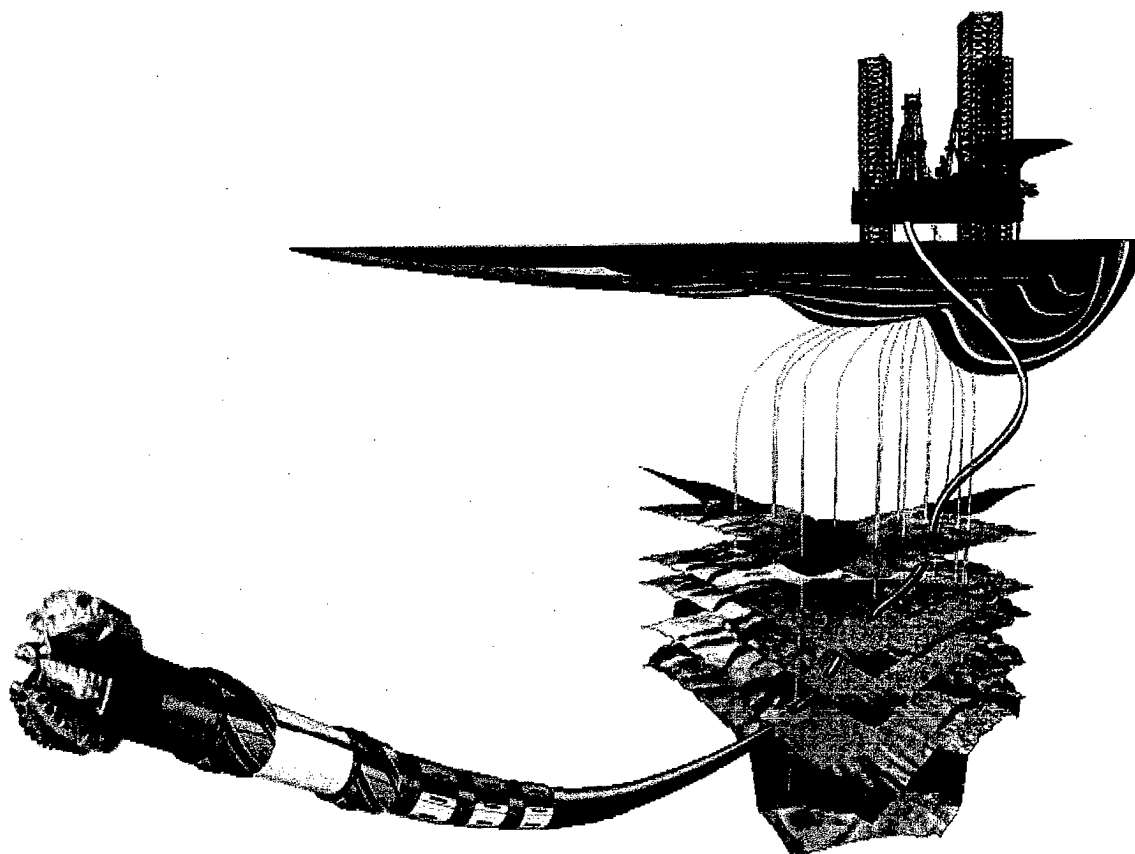
Magnetic Parameters Model: BGM 2008 Dip: -40.569° Mag Dec: +2.467°	Date March 04, 2009 FS: 46854.8 nT	Surface Location Lat: S12 40 20.470 Lon: E124 32 22.156	GDAS/MGAS4 Zone 51 Northing: 8598604.30 m Easting: 667178.80 m Grid Conv: -0.33780481° Scale Fact: 0.9999437651	Miscellaneous Slot: Montara H1 Plan: Montara H1 ST1 Actual Survey Date: March 04, 2009	TVD Ref: RT (35.20 m above AHD)
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5. Drilling & MWD/LWD Run Summary





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PTTEP Australasia

Montara H1 ST1

End of Well Drilling Summary

18th Feb 2009 to 5th Mar 2009

Montara H1 ST1 Objectives:

After drilling Montara H1 the decision was made, based on geological data obtained while drilling, to POOH to run cement plugs and sidetrack. The 311mm (12-1/4") section was to be re-drilled to intersect and land within the reservoir to enable drilling the subsequent section within the reservoir.



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BHA # 1 : Run 1: 311mm (12 1/4") Rotary Steerable Assembly (3130m – 3411m)

The Xceed ARC and PowerPulse from previous runs were picked up and run in hole:

- 12 1/4" Hycalog RSX616-A16 PDC Bit with 6 x13 jets
- Xceed 900 (0.6 deg)
- ARC8
- PowerPulse
- Crossover
- 8" NM Drill Collar
- 8" Jar
- Crossover
- 5 1/2" HWDP (12 joints)
- 5-1/2" Drillpipe to surface

Drilling Summary

The top of the cement plug was encountered at 3130m. At this point the Xceed was downlinked into a 100% setting at -60TF. From 3130m to 3142m the BHA was control drilled at 10m/hr and 60RPMs. No weight was taken by the cement/formation while using these parameters, indicating that the cement plug was not sufficiently hard for kicking off. From 3142m to 3212m penetration rate was maximized in order to try to force weight to the bit, forcing the BHA to kickoff from the theoretically harder cement to the softer formation. This was executed with various toolface settings, and proved unsuccessful for sidetracking.

From 3212m to 3271m the well was time-drilled with penetration rates beginning at 0.5m/hr and finishing at 4m/hr. The initial toolface setting was 100% at 180 degrees, and finished with 100% at -96 degrees. Time drilling proved successful and the well was kicked off from the original hole.



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From 3271m to 3388m the well was control drilled with penetration rates from 20m/hr to 35m/hr. Various TF settings were used to slowly bring the trajectory around to the left and build inclination towards 90 degrees according to the directional plan.

From 3388m poor directional response was noted from the Xceed. At 3411m, after troubleshooting the tool, it was determined to have failed.

As it was impossible to meet the directional objectives of the run with a failed steering tool, TD was called at 3411m to pull out and change the Xceed.

During the trip out of the hole, a washout was discovered in one of the drill pipes.

A tight section with significant overpull was encountered at 3120m. The topdrive was screwed in, circulation broke, and the BHA was reamed out through the section. The rest of the trip out was uneventful.

The failed Xceed was laid out and replaced. The bit was in good condition, and re-attached to be used in the next run. It graded:

1-1-CT-C-X-IN-NO-BHA

MWD Run #1

The wellsite geologist informed the engineers that the ADN8 would not be required in this run as sufficient bulk density & porosity data had already been acquired. ARC was programmed with the same 6 second configuration as used on previous runs. It was initialized on deck prior to running in hole. A Float was installed into Xceed before making up the 12.25in PDC bit. The remaining BHA was then made up and run into the hole to the first heavy weight drillpipe. At this point a successful shallow hole test of the tools was conducted, confirming their functionality. Running in then continued until the cement was tagged.



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Time drilling commenced in order to successfully side track the well. After sidetrack was confirmed the ROP was slowly built up. Drilling of the 311mm (12-1/4") section proceeded as per directional driller's instruction. At approximately 3412mMD, Xceed stopped responding to DD's downlink commands. The directional drillers attempted, unsuccessfully, to mitigate; however, the inclination began to dropping. At this point the client was advised to POOH in order to change out the Xceed.

POOH to the surface commenced shortly after. Once at the surface a washout in one of the drillpipe was detected. This was not visible in the log. The Xceed was laid down on the deck and a back up was picked up in its place. The ARC, PowerPulse, Crossover and Jar were racked back in the derrick while this was occurring. At the client's request the ARC RM data was not downloaded from the tool to ensure as short a time as possible out of the hole. The real time data was presented to the client prior to coming reaching the surface.



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BHA # 3: Run 2: 311mm (12 ¼") Rotary Steerable Assembly (1644m – 1787m)

The following 311mm (12 ¼") Xceed/MWD assembly was made up and run in hole:

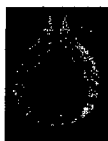
- 12 ¼" Hycalog RSX616M-A10PDC Bit with 6 x 13 jets
- Xceed 900 (0.6 deg)
- ARC8
- ILS with 9 ¼" sleeve
- PowerPulse
- ADN8
- 8 1/4" Drill Collar (3 joints)
- 11 ¾" String Stabilizer
- 8 ¼" Drill Collars (3 joints)
- Jar
- 8 1/4" Drill Collar (2 joints)
- Crossover
- 5 1/2" HWDP (12 joints)
- 5-1/2" Drillpipe to surface

Drilling Summary

The cement was tagged at 1612m and the floats, cement and shoe drilled out to 1637m using seawater. The hole was displaced to Aquadril mud before drilling out the shoe. After cleaning out the rathole from 1637m to 1644m, new hole was drilled from 1644m to 1647m where an FIT was conducted to 1.25sg.

After drilling to 1651m the Xceed was downlinked to 0°GTF / 30% to continue the build from 12°. The assembly showed a slow right hand walk so at 1705m the tool was set to -24°GTF / 30%.

Partial loss of returns occurred at approximately 1712m with losses estimated at 300 bbl/hr. At 1727m the well was displaced with seawater and drilling continued from 1727m



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to 1786m, through the Puffin sands. Increased torque and vibration was seen while drilling with seawater so the string RPM was reduced to 100 which reduced the vibration. The ADN8 failed while drilling with the reduced shocks. The downhole losses appeared to decrease so at 1787m the hole was displaced back to Aquadril mud. Downhole mud losses while circulating at 750 gpm were measured at 120 bbl/hr. Instructions were received to trip out to set a cement plug over the loss zone.

The BHA was racked back and the bit graded 1-1-CT-A-X-I-DEL-HP.

Drillpipe was run in and a cement plug set from 1787m to 1616m and approximately 20bbbls was squeezed into the formation. The hole was displaced back to seawater before tripping out.

MWD Run #2

The ARC & PowerPulse were picked up from the derrick and made up to the back up Xceed. The ARC was re-run with the same 6 second configuration as used previously. A successful SHT was conducted at the first HWDP and the assembly was run in hole.

The bottom was tagged at 3411mMD and drilling proceeded with very high stick slip (both on bottom and off bottom) for the first few stands. This may have been a result of pumping up to 1100 gpm on the last trip out of the hole and the mudcake may have been washed away. The client and directional driller were made aware and they did all they could to mitigate the problem, but with limited success. After a while however, the stick slip abated suddenly after a connection. Drilling continued as per the directional driller's instructions with out further incident.



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At 3796mMD TD was declared based on a resistivity spike on the LWD real-time log, which indicated the GOC. Several bottoms up were circulated before reaming out of the hole to ensure a safe trip. At approximately 3400m the assembly was pulled on elevators. The trip out was smooth. Once at the surface when the connection between the PowerPulse lower saver sub and the ARC uphole box was broken, a washout on the threads was seen along with some minor erosion on the shoulder of the connections. The tools were then laid out on the deck and the recorded mode data dumped, processed and presented to the client in good time.

Further inspection of the BHA components revealed that the wear-bands on the ARC suffered significant wear on the facing and downhole surfaces, indicative of a very harsh drilling environment. A new ARC & PowerPulse lower saver sub will be picked up in the next run for Montara H4.



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MWD/LWD Run Summary

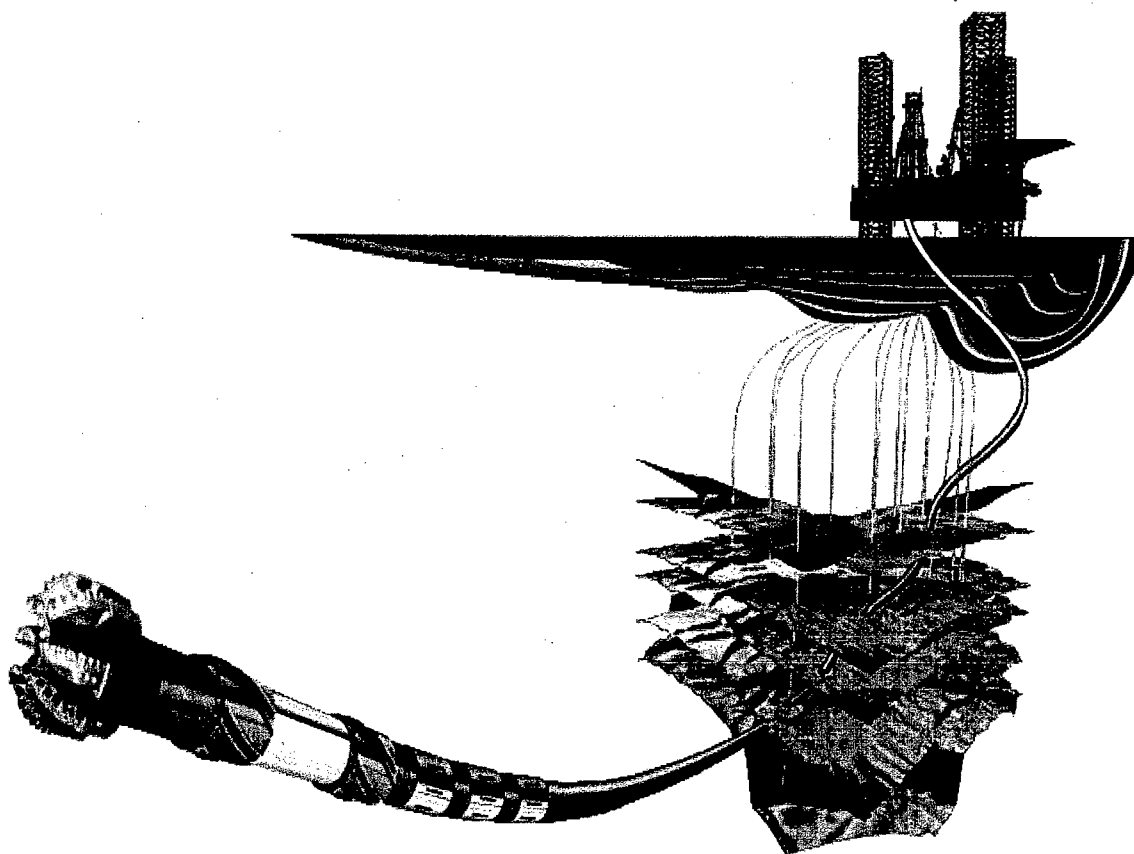
BHA#/ MWD RUN#	Hole Size (mm)	MWD/LWD Services	Start Depth (m)	End Depth (m)	Distance (m)	Run Start Date	Run End Date
1 / 1	311	PowerPulse* arcVISION*	3130	3411	281	1-Mar-09	4-Mar-09
2 / 2	311	PowerPulse* arcVISION*	3411	3796	385	4-Mar-09	5-Mar-09

BHA#/ MWD RUN#	BRT Hrs	Drilling Hrs	Circulating Hrs	Max Temp (°C)	Trip for MWD	Failure Type
1 / 1	72.79	27.08	37.04	82	NO	Xceed motor failure
2 / 2	27.0	6.75	11.1	84	NO	NO




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6. BHA Reports





	Serial Number
5-1/2 " Drillpipe	
12 x 5 1/2" HWDP (12 joints)	112.19
Crossover	1.22
8" Hydraulic Jar	9.28
8" NM Drill Collar	9.28
Crossover	0.72
PowerPulse 825	8.46
ARC-8	5.91
Xceed 900	8.66
	0.29

PTTEP
Timor Sea AC / L7
Montara
West Atlas
Montara H1 ST1



PTTEP Australasia

Montara H1 ST1 BHA#1 12 1/4" PDC_Xceed9_PP_ARC

BHA DESCRIPTION

ELEMENT	LENGTH (m)	CUMUL (m)	OD (in)	ID (in)	MAX OD (in)
12 1/4 " PDC Bit	0.29	0.29	12 1/4	3 3/4	12 1/4
Xceed 900	8.66	8.95	9	4 1/4	12 1/8
ARC-8	5.91	14.86	8 1/4	4 1/4	9 1/16
PowerPulse 825	8.46	23.32	8 3/8	5 1/16	8 3/8
Crossover	0.72	24.04	8 1/4	3 1/8	8 1/4
8" NM Drill Collar	9.28	33.32	7 15/16	2 13/16	7 15/16
8" Hydraulic Jar	9.28	42.60	8	3 1/4	8
Crossover	1.22	43.82	8	3	8
12 x 5 1/2" HWDP (12 joint)	112.19	156.01	5 1/2	3	7
5-1/2 " Drillpipe			5 1/2	4 21/32	7

Bit to D&I Xceed Sensor = 5.38m
 Bit to APWD Sensor = 10.72m
 Bit to Resistivity Sensor = 11.43 m
 Bit to Gamma Ray Sensor = 11.48 m
 Bit to Direction & Inclination Sensor = 18.98 m

DRILLING OVERVIEW

Depth in:	3130.00 m	Depth out:	3411.00 m
Inclination in:	82.61°	To:	89.30°
Direction in:	213.22°	To:	204.80°
Total Drilled	281.00 m	Dogleg:	2.38



Quality Control

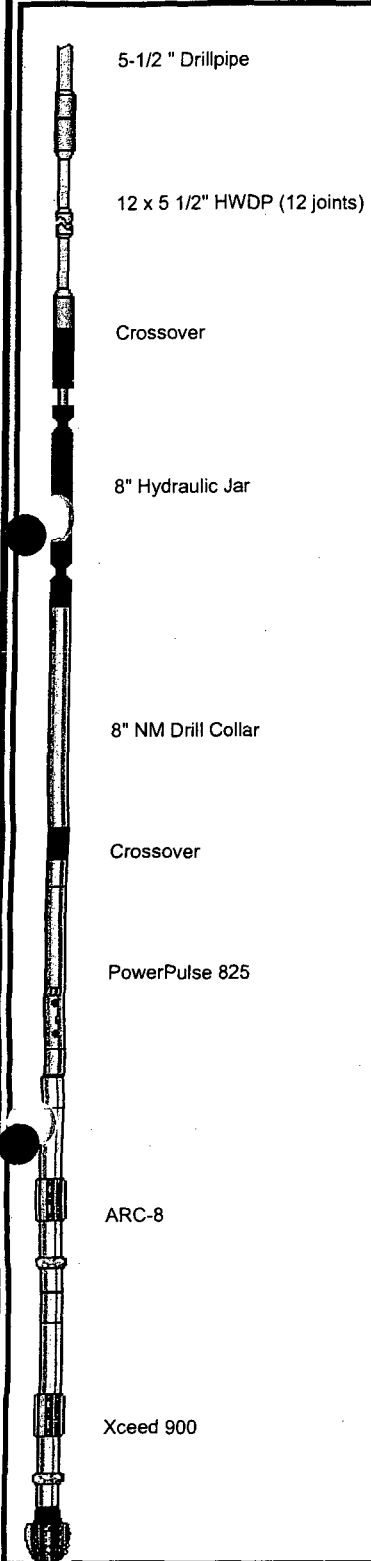
Created by: JLeahey

Date: 3/3/2009

Checked by:


Date:





	Serial Number
5-1/2 " Drillpipe	
12 x 5 1/2" HWDP (12 joints)	112.19
Crossover	1.22
8" Hydraulic Jar	9.28
8" NM Drill Collar	9.28
Crossover	0.72
PowerPulse 825	8.46
ARC-8	5.91
Xceed 900	8.66
	0.29

PTTEP
Timor Sea AC / L7
Montara
West Atlas
Montara H1 ST1
Montara H1 ST1 BHA#2 12 1/4" PDC_Xceed9_PP_ARC



PTTEP Australasia

BHA DESCRIPTION


ELEMENT	LENGTH (m)	CUMUL (m)	OD (in)	ID (in)	MAX OD (in)
12 1/4 " PDC Bit	0.29	0.29	12 1/4	3 3/4	12 1/4
Xceed 900	8.66	8.95	9	4 1/4	12 1/8
ARC-8	5.91	14.86	8 1/4	4 1/4	9 1/16
PowerPulse 825	8.46	23.32	8 3/8	5 1/16	8 3/8
Crossover	0.72	24.04	8 1/4	3 1/8	8 1/4
8" NM Drill Collar	9.28	33.32	7 15/16	2 13/16	7 15/16
8" Hydraulic Jar	9.28	42.60	8	3 1/4	8
Crossover	1.22	43.82	8	3	8
12 x 5 1/2" HWDP (12 joint)	112.19	156.01	5 1/2	3	7
5-1/2 " Drillpipe			5 1/2	4 21/32	7

Bit to D&I Xceed Sensor = 5.38m
 Bit to APWD Sensor = 10.72m
 Bit to Resistivity Sensor = 11.43 m
 Bit to Gamma Ray Sensor = 11.48 m
 Bit to Direction & Inclination Sensor = 18.98 m

DRILLING OVERVIEW

Drilled from 3411m to the 9-5/8" casing point at 3496m, as per the directional plan.

Depth in:	3411.00 m	Depth out:	3796.00 m
Inclination in:	89.30°	To:	90.00°
Direction in:	204.80°	To:	218.00°
Total Drilled	385.00 m	Dogleg:	4.2



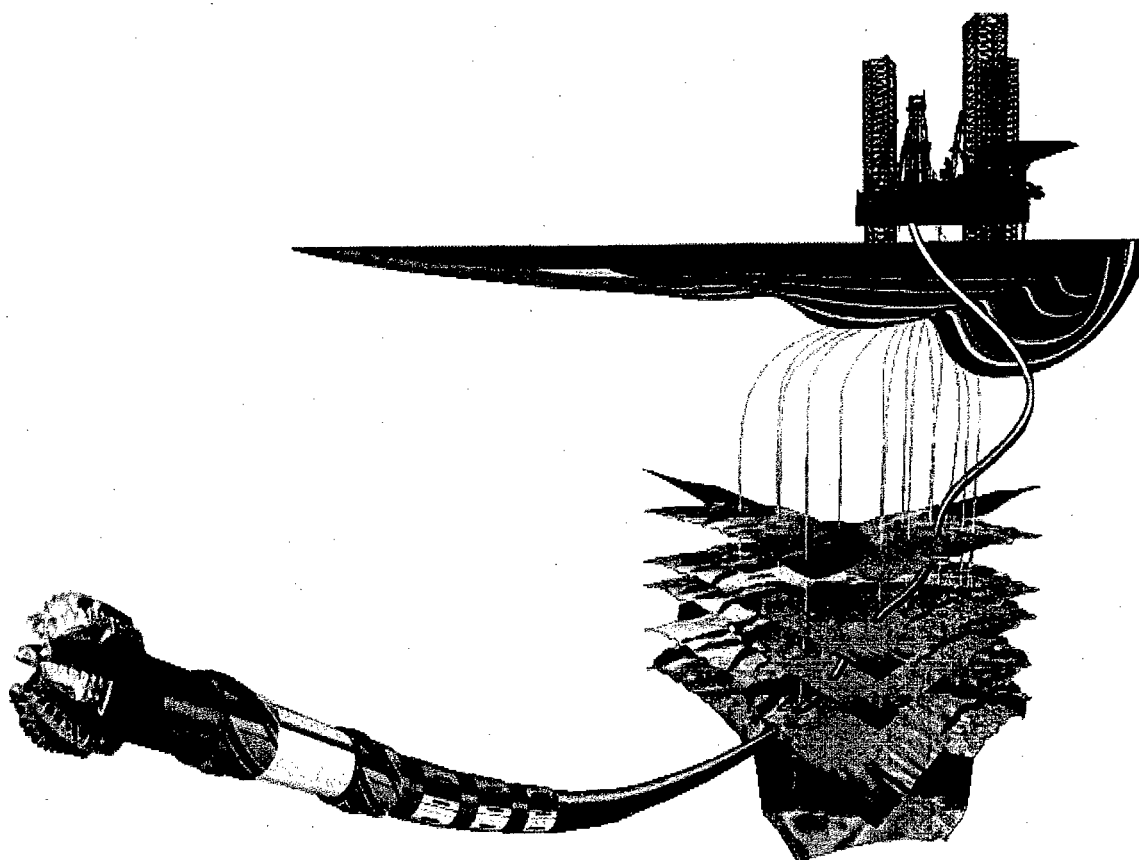
Quality Control
 Created by: JLeahey
 Checked by:

Date: 3/3/2009
 Date:



Schlumberger

7. Drilling Parameter Sheets





Slide Sheet



Montara H1 ST1 BHA#1 12 1/4" PDC Xceed9_PP_ARC

Client: PTTEP Field: PTTEP-Montara Structure: Montara	Well: Montara H1 Borehole: Montara H1 ST1 UWI/API#:	Directional Driller: Matt Blacker Directional Driller: Jody Leahy Job #: 09AWA0077
Depth In: 3130 Inclination In: 82.61 Azimuth In: 213.22	Depth Out: 3412 Inclination Out: 89.2 Azimuth Out: 205.02	Tot Distance: 282 ROTATE: 0 STEERING: 282
% ROTAT 0 % STEER 100	Total Time: 28.8 Time: 0.0 28.8	Total ROP: 9.8 STEERING ROP: 9.8
Comments:		

Statistics:

None	Min	Max	Sum	Min	Max	Sum	Avg	Avg	Avg	Max	Avg	Avg	Avg	Avg	Avg	Max	Avg	Avg	Avg	None
	3/2/2009 1:00	3/3/2009 10:12	28.77	3130	3412	282	44.6	-91.3	75.284	G	806	120	17.2	22.9	2221	3391.01	85.62	209.45		

Orienting Method	Start Time (m/d/yy h:mm)	End Time (m/d/yy h:mm)	Duration (hr)	Md From (m)	Md To (m)	Course (m)	Calc ROP (m/hr)	TF Angle (°)	Power Set (%)	TF Mode (G/M)	Flow (gal/min)	RPM (c/min)	WOB (1000 lbf)	Torque (1000 ft.lbf)	SPP On Bot (psi)	Svy Md (m)	Incl (°)	Azimuth (°)	DLS (° / 30 m)	Comment
STEERING	3/2/2009 1:00	3/2/2009 1:57	0.95	3130	3142	12	12.6	-60	100	G	750	60	1	12	1800					Tag Cement at 3130m
STEERING	3/2/2009 2:00	3/2/2009 2:50	0.83	3142	3155	13	15.6	-60	100	G	700	60	1	18	1800					
STEERING	3/2/2009 3:36	3/2/2009 3:43	0.12	3155	3161	6	51.4	-60	100	G	700	60	15	22	1800	3161.29	82.61	213.22		
STEERING	3/2/2009 3:44	3/2/2009 4:10	0.43	3161	3175	14	32.3	-60	100	G	700	100	17	22	1950					
STEERING	3/2/2009 4:30	3/2/2009 4:39	0.15	3175	3183	8	53.3	-132	100	G	700	120	17	30	2000					
STEERING	3/2/2009 5:00	3/2/2009 5:08	0.13	3183	3212	29	217.5	-132	100	G	800	120	17	35	2000	3190.52	82.9	213.52	0.43	Increase ROP to get off cement plug - soft cement not def
STEERING	3/2/2009 5:50	3/2/2009 7:00	1.17	3212	3214.5	2.5	2.1	180	100	G	750	130	1	14	2000					Begin time drilling due to soft cement
STEERING	3/2/2009 7:00	3/2/2009 12:00	5.00	3214.5	3219.5	5	1	180	100	G	750	130	1	14	1900					
STEERING	3/2/2009 12:00	3/2/2009 16:30	4.50	3219.5	3223	3.5	0.8	180	100	G	750	130	2	15	1870	3222.38	83.13	213.06	0.48	
STEERING	3/2/2009 16:30	3/2/2009 19:05	2.58	3223	3228	5	1.9	-144	100	G	750	130	3	16	1900					
STEERING	3/2/2009 19:05	3/2/2009 20:37	1.53	3228	3231	3	2	-120	100	G	750	130	3	16	1800					
STEERING	3/2/2009 20:37	3/2/2009 21:29	0.87	3231	3234	3	3.5	-96	100	G	750	130	3	15	1940					
STEERING	3/2/2009 21:29	3/2/2009 22:38	1.15	3234	3243	9	7.8	-96	100	G	750	130	6	16	1940					
STEERING	3/2/2009 22:55	3/3/2009 2:17	3.37	3243	3263	20	5.9	-96	100	G	750	130	9	18	1950	3251.25	84.14	211.4	2.01	Stringer @ 3252m
STEERING	3/3/2009 2:17	3/3/2009 3:08	0.85	3263	3271	8	9.4	-96	100	G	750	130	12	18	1990					Rack back stand, exit and re-enter sidetrack on elevators
STEERING	3/3/2009 3:43	3/3/2009 4:05	0.37	3271	3278	7	19.1	-96	100	G	800	130	15	20	2120					
STEERING	3/3/2009 4:05	3/3/2009 4:35	0.50	3278	3287	9	18	-96	60	G	800	130	15	20	2120	3279.81	85.17	209.37	2.38	
STEERING	3/3/2009 4:35	3/3/2009 5:26	0.85	3287	3300	13	15.3	-60	60	G	800	130	15	20	2130					
STEERING	3/3/2009 5:49	3/3/2009 6:19	0.50	3300	3315	15	30	-60	60	G	850	130	20	23	2410	3309.82	86.73	208.01	2.07	
STEERING	3/3/2009 6:19	3/3/2009 6:52	0.55	3315	3331	16	29.1	-72	60	G	850	130	20	23	2410					
STEERING	3/3/2009 7:09	3/3/2009 7:37	0.47	3331	3339	8	17.1	-72	60	G	850	130	20	24	2430	3339.86	88.08	206.1	2.33	
STEERING	3/3/2009 7:37	3/3/2009 8:14	0.62	3339	3360	21	34.1	-72	30	G	900	130	30	26	2700					
STEERING	3/3/2009 8:32	3/3/2009 8:48	0.27	3360	3372	12	45	-72	30	G	900	130	30	27	2720	3370.14	88.65	205.35	0.93	
STEERING	3/3/2009 8:48	3/3/2009 9:13	0.42	3372	3388	16	38.4	-108	30	G	900	130	30	27	2740					
STEERING	3/3/2009 9:13	3/3/2009 9:17	0.07	3388	3390	2	30	-108	50	G	900	130	35	25	2750					Poor steering
STEERING	3/3/2009 9:40	3/3/2009 10:07	0.45	3390	3410	20	44.4	-108	50	G	900	130	35	26	2750	3391.01	89.2	205.02	0.92	
STEERING	3/3/2009 10:07	3/3/2009 10:12	0.08	3410	3411	1	24	-108	100	G	900	130	22	26	2840					Troubleshoot Xceed steering problem

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Client: PTTEP		Well: Montara H1		Directional Driller: Matt Blacker	
Field: PTTEP-Montara		Borehole: Montara H1 ST1		Directional Driller: Jody Leahy	
Structure: Montara		UWI/API#:		Job #: 09AWA0077	
Depth In: 3411	Depth Out: 3796	Tot Distance: 385		Total Time: 9.2	Total ROP: 41.7
Inclination In: 89.6	Inclination Out: 90.03	ROTATE: 0	% ROTAT 0	Time: 0.0	
Azimuth In: 204.2	Azimuth Out: 217.97	STEERING: 385	% STEER 100	9.2	STEERING ROP: 41.7
Comments:					

Statistics:

None	Min	Max	Sum	Min	Max	Sum	Avg	Avg	Max	Avg	Avg	Avg	Avg	Max	Avg	Avg	Avg	None
3/4/2009 13:16	9.23	3/5/2009 5:54	3411	3796	385	45.8	88.4	152.076	G	895	130	25.4	28.1	2697	3776.37	89.83	207.48	1.45

Orienting Method	Start Time (m/d/yy h:mm)	End Time (m/d/yy h:mm)	Duration (hr)	Md From (m)	Md To (m)	Course (m)	Calc ROP (m/hr)	TF Angle (°)	Power Set (%)	TF Mode (G/M)	Flow (gal/min)	RPM (r/min)	WOB (1000 lb)	Torque (1000 ft-lb)	SPP On Bot (psi)	Svy Md (m)	Incl (°)	Azimuth (°)	DLS (° / 30 m)	Comment
STEERING	3/4/2009 13:16	3/4/2009 13:27	0.18	3411	3420	9	48.1	0	0	G	900	130	20	28	2860					RT 278, PU 370, SO 232
STEERING	3/4/2009 13:51	3/4/2009 14:00	0.15	3420	3422	2	13.3	0	0	G	900	130	10	24	2780					
STEERING	3/4/2009 14:00	3/4/2009 14:19	0.32	3422	3436	14	44.2	90	198.3	G	900	130	30	29	2790	3430.12	89.6	204.2	0.53	DL to HIA/HT
STEERING	3/4/2009 14:19	3/4/2009 14:37	0.30	3436	3450	14	46.7	90	198.3	G	825	130	30	31	2440					Losing over shakers, decrease GPM
STEERING	3/4/2009 15:00	3/4/2009 15:16	0.27	3450	3460	10	37.5	90	198.3	G	900	160	15	25	2840	3458.1	89.71	203.42	0.84	High stick-slip = Xceed shutting down
STEERING	3/4/2009 15:16	3/4/2009 15:29	0.22	3460	3464	4	18.5	90	198.3	G	900	160	10	25	2880					
STEERING	3/4/2009 15:29	3/4/2009 15:58	0.48	3464	3478	14	29	90	198.3	G	900	120	20	29	2890					
STEERING	3/4/2009 16:14	3/4/2009 16:56	0.70	3478	3506	28	40	90	198.3	G	900	120	20	30	2830	3487.23	89.89	203.43	0.19	RT 289, PU 361, SO 225
STEERING	3/4/2009 17:21	3/4/2009 17:36	0.25	3506	3520	14	56	90	198.3	G	900	125	20	29	2830	3516.83	89.89	202.87	0.57	Stick Slip Disappeared
STEERING	3/4/2009 17:36	3/4/2009 17:57	0.35	3520	3536	16	45.7	90	198.3	G	900	140	30	30	2830					
STEERING	3/4/2009 18:18	3/4/2009 18:29	0.18	3536	3544	8	43.6	90	0	G	900	130	30	30	2830					
STEERING	3/4/2009 18:29	3/4/2009 18:53	0.40	3544	3561	17	42.5	89.8	198.3	G	900	130	30	30	2830	3546.54	89.83	202.57	0.31	HIA 89.8 inc, 198.3 azi
STEERING	3/4/2009 18:53	3/4/2009 19:02	0.15	3561	3567	6	40	89.8	206.3	G	900	130	30	30	2770					HIA 89.8 inc, 206.3 azi
STEERING	3/4/2009 19:22	3/4/2009 19:34	0.20	3567	3574	7	35	89.8	206.3	G	900	130	30	26	2570					
STEERING	3/4/2009 19:34	3/4/2009 19:58	0.40	3574	3590	16	40	89.8	206.3	G	900	130	30	28	2570	3576.15	89.54	203.06	0.58	HIA 89.8 inc, 50% right turn, Pressure Loss, Pick up to troubleshoot- #3 Pump bleedoff valve leak
STEERING	3/4/2009 21:12	3/4/2009 21:20	0.13	3590	3596	6	45	89.8	206.3	G	900	130	30	28	2750					Pump #2 Liner Swab
STEERING	3/4/2009 22:40	3/4/2009 23:24	0.73	3596	3626	30	40.9	89.8	206.3	G	900	130	28	28	2530	3605.2	89.48	204.72	1.72	
STEERING	3/4/2009 23:50	3/5/2009 0:08	0.30	3626	3634	8	26.7	89.8	206.3	G	900	130	26	27	2520	3634.98	89.48	205.87	1.16	
STEERING	3/5/2009 0:08	3/5/2009 0:14	0.10	3634	3643	9	90	89.8	0	G	900	130	26	28	2520					HIA 89.8 inc, 60% right turn
STEERING	3/5/2009 0:14	3/5/2009 0:35	0.35	3643	3656	13	37.1	89.9	0	G	900	130	27	28	2620					HIA 89.9 inc, 60% right turn
STEERING	3/5/2009 0:59	3/5/2009 1:13	0.23	3656	3663	7	30	90.1	0	G	900	130	25	25	2670					HIA 90.1 inc, 60% right turn
STEERING	3/5/2009 1:13	3/5/2009 1:26	0.22	3663	3674	11	50.8	90.1	0	G	900	130	25	25	2670	3665.2	89.8	207.23	1.39	Set to High Inclination Gain
STEERING	3/5/2009 1:26	3/5/2009 1:41	0.25	3674	3685	11	44	90.1	0	G	900	130	27	29	2690					HIA 90.1 inc, 80% right turn
STEERING	3/5/2009 2:00	3/5/2009 2:16	0.27	3685	3696	11	41.3	90.1	0	G	900	130	27	27	2670	3694.63	89.86	211.35	4.2	
STEERING	3/5/2009 2:16	3/5/2009 2:33	0.28	3696	3710	14	49.4	90.2	0	G	900	130	27	27	2670					HIA 90.2 inc, 80% right turn
STEERING	3/5/2009 2:33	3/5/2009 2:40	0.12	3710	3715	5	42.9	90.4	0	G	900	130	26	25	2750					HIA 90.4 inc, 80% right turn
STEERING	3/5/2009 3:05	3/5/2009 3:26	0.35	3715	3731	16	45.7	90.4	206	G	900	130	24	27	2800	3722.38	90.32	214.56	3.51	HIA 90.4 inc, 206 azi
STEERING	3/5/2009 3:26	3/5/2009 3:40	0.23	3731	3743	12	51.4	90.4	216	G	900	130	24	27	2810					HIA 90.4 inc, 216 azi
STEERING	3/5/2009 4:11	3/5/2009 4:25	0.23	3743	3751	8	34.3	90.4	216	G	900	130	28	28	2670					
STEERING	3/5/2009 4:25	3/5/2009 4:46	0.35	3751	3765	14	40	90.4	220	G	900	130	28	29	2670	3752.47	90.32	216.14	1.58	HIA 90.4 inc, 220 azi
STEERING	3/5/2009 4:46	3/5/2009 4:49	0.05	3765	3773	8	160	90.3	220	G	800	130	29	29	2260					HIA 90.3 inc, 220 azi, Losing mud at shakers
STEERING	3/5/2009 5:25	3/5/2009 5:50	0.42	3773	3794	21	50.4	90.3	220	G	900	130	20	27	2610	3776.37	90.03	217.97	2.33	
STEERING	3/5/2009 5:50	3/5/2009 5:54	0.07	3794	3796	2	30	90.3	218	G	900	130	20	28	2610					HIA 90.3 inc, 218 azi, TD 12-1/4" Section

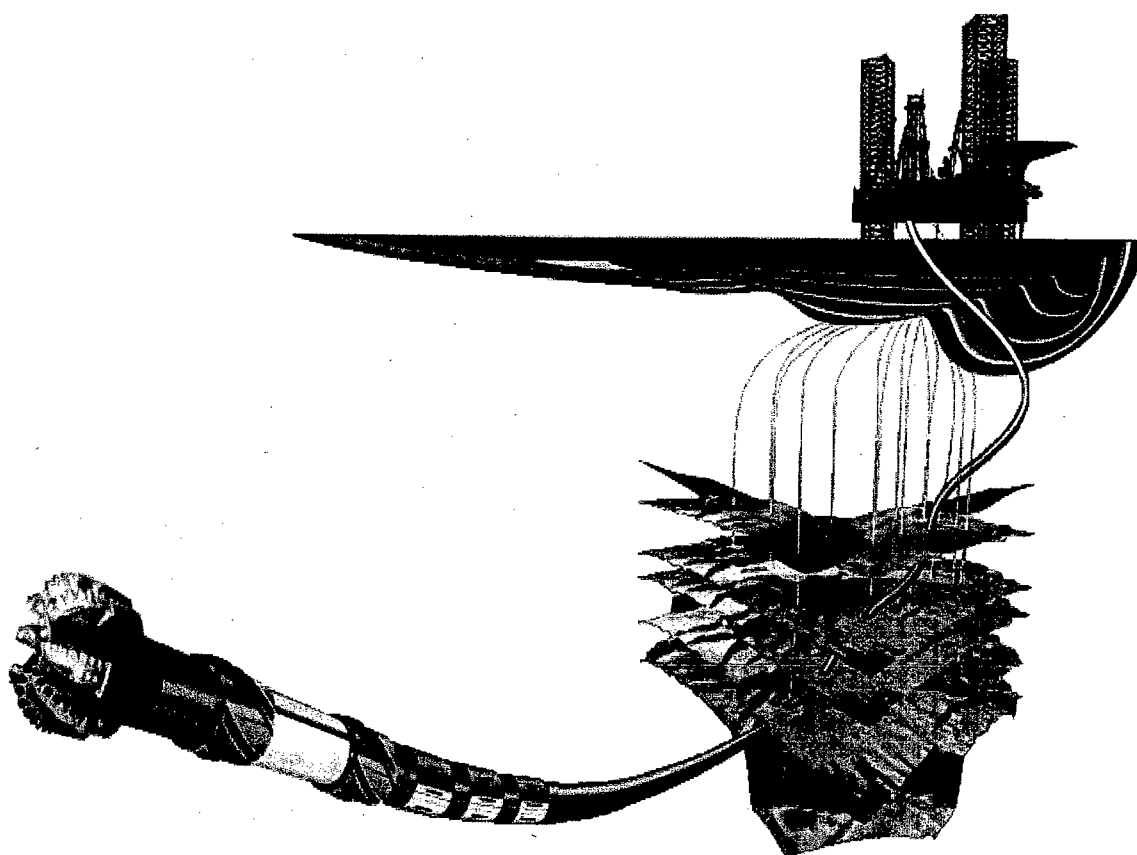


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Schlumberger

8. Drilling Tool Run Reports



Schlumberger

PowerDrive Xceed Summary

PowerDrive

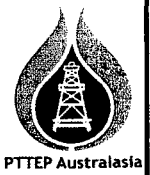
The new direction in rotary drilling

Xceed Rev 1: Please do not make any changes to this form !!!

JOB NUMBER 09AWA0077	COMPANY REP. Noel Treasure	DATE IN 1-Mar-09	DATE OUT 4-Mar-09	PowerDrive Run # 1	MWD Run # 1	Rig Bit Run # 1	PD Engineer MB/JL		
CLIENT Coogee Resources		Hole Depth - FROM 3130 m		TO 3411 m		CRSPA 9-015	CRSC-AA 120	CRSEM-BA 001	
RIG NAME West Atlas		Inclination - FROM 82.61 deg		TO 89.30 deg		CRSSA ENP-003			
WELL NAME Montara H1 ST1		Azimuth - FROM 213.22 deg		TO 204.80 deg		Bit Mfg Hycalog	Bit Type RSX616-A16	Bit SN 221010	
LOCATION Timor Sea		Hole Size 12 1/4"		Bit to D&I 18.98 m	Bit to PD D&I 5.37 m	Dull Grade - IADC Cutting Structure 1-1-CT-C-X-IN-NO-BHA			
Map file name Fast Downlink	Mag Dec / Grid Cor / Total Corr. 2.475 -0.3378 2.813		Resolver Offset 852		Downlink response ? Good		On Bottom Hours 27.08	Last Casing size/w / depth 1638	
Bit-Midpoint Lower Szt 0.68	Bit-Midpoint Upper Slab 4.32	Flex Lgth n/a	WOB MIN / MAX 1 35		Ave. RPM 120	Ave. WOB 17.2	Off Bottom Circulating Hours 8.97	ft / M Drilled this run 281.0m	
PD MIN/MAX 600 1200	Battery Voltage 3.3	Date Due 21/5/09	RPM MIN / MAX 120 130		MWD Min/Max Flow Rating 600 1200		Below Rotary Table Hours 73.00	PD ft/M Drilled (Operating) 281.0m	
Fast Downlink 36 sec	60 sec	Pulse height 10%	Used 36 sec	Actual Flow MIN / MAX 600 900		Pump Output / Type 6.27 Triplex	PowerDrive Operating Hours 36.05	On Btm ROP 10.4	Ave ROP 10.4
Tool Response				Slab gauge before/after run 12 1/8" 12 1/8"		Run Objective			
2:36 Max BUR 1:55 Max Turn Rt 2:14						Sidetrack from H1, land horizontal to plan			
SOFTWARE VERSION						Reason for POOH			
Acq 9.1A-70(03) MTC-70(CPU: 37c02 Comm 6.1A45(00))				MWD	V8.0C	IDEAL	13.0c.13	Downhole Xceed Failure	

Bit Hydraulics Calculations				PowerDrive Serial No.			PUMP HOURS		Motor Run Information	
Enter data in blue areas				PART	PFX	SN	START	CUM	Motor type	Serial number
Pump Flow	900	Bit Nozzle Size and TFA		Electronics	CRSEM-BA	001	111.79	147.84	N/A	N/A
Mud Weight	1.16	Nozzle	/ 32	Steering Section	CRSC-AA	120	111.79	147.84	Bend type	Bend Angle
Bit Diameter	12.25	1	13	Collar	CRSPA	9-015	111.79	147.84	N/A	N/A
Bit Flow	900	2	13	Power Generation	CRSSA	ENP-003	111.79	147.84	Slab type	Slab Gauge
Bit Pressure Drop	143	3	13	Sub	0	0	0.00		N/A	N/A
Hydraulic HP	75	4	13						Off Bottom pressure	On Bottom pressure
HSI	0.6	5	13						N/A	N/A
Impact Press.	259	6	13						Backreaming Hours	Total Reaming Hours
		7	13						N/A	N/A
		8	13						Bearing Play after run (mm)	N/A
		9	13							
		10	13	Motor		N/A				
		Bit TFA =	0.778						Mud properties	
									Mud Company	BHI
									Mud Type	AQUA-DRILL
									MW at start of run	1.17 sg
									MW at end of run	1.16 sg
									Funnel Viscosity	66 sec
									Plastic Viscosity	27
									Yield Point	13.89
									Maximum DH Temp. deg C	76 degC
									Sand %	0.5%
									Solid %	5.00%

Run Summary
 Attempted sidetrack from top of cement at 3130m. Cement was green, and could not kickoff. Time drilled from 3212m to 3663m to execute sidetrack. Began following plan, landing at 90 degrees.



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PowerDrive Xceed Summary

PowerDrive

The new direction in rotary drilling

Xceed Rev 1: Please do not make any changes to this form !!!

JOB NUMBER 09AWA0077	COMPANY REP. Noel Treasure	DATE IN 4-Mar-09	DATE OUT 5-Mar-09	PowerDrive Run # 2	MWD Run # 2	Rig Bit Run # 2	PD Engineer MB/JL	
CLIENT Coogee Resources		Hole Depth - FROM 3411 m		TO 3796 m		CRSPA 88	CRSC-AA 92	CRSEM-BA 94
RIG NAME West Atlas		Inclination - FROM 89.30 deg		TO 90.00 deg		CRSSA 090		
WELL NAME Montara H1 ST1		Azimuth - FROM 204.80 deg		TO 218.00 deg		Bit Mfg Hycalog	Bit Type RSX616-A16	Bit SN 221010
LOCATION Timor Sea		Hole Size 12 1/4"		Bit to D&I 18.98 m	Bit to PD D&I 5.37 m	Dull Grade - IADC Cutting Structure		
Map file name Fast Downlink	Mag Dec / Grid Cor / Total Corr. 2.475 -0.3378 2.813	Resolver Offset 870		Downlink response ? Good		On Bottom Hours 9:40	Last Casing size/wt / depth 1638	
Bit-Midpoint Lower Ssr 0.68	Bit-Midpoint Upper Slab 4.32	Flex Lgth n/a	WOB MIN / MAX 10 30	Ave. RPM 130	Ave. WOB 25.4	Off Bottom Circulating Hours 11:68	ft / M Drilled this run 385.0m	
PD MIN/MAX 600 1200	Battery Voltage 3.3	Date Due 7-May-09	RPM MIN / MAX 120 160	MWD Min/Max Flow Rating 600 1200	Below Rotary Table Hours 58:00		PD ft/M Drilled (Operating) 385.0m	
Fast Downlink 36 sec	Pulse height 60 sec	Used 10%	Actual Flow MIN / MAX 750 900	Pump Output / Type 6.27 Triplex	PowerDrive Operating Hours 21:08	On Btm ROP 41.0	Ave ROP	
Tool Response				Run Objective				
Max DLS 4.2	Max BUR 1.57	Max Turn Rt 4.2	Slab gauge before/after run 12 1/8" 12 1/8"	Sidetrack from H1, land horizontal to plan				
SOFTWARE VERSION				Reason for POOH				
Acq 9-1A-70(03)	MTC 70(CPU)	Comm 6-1A45(00)	MWD V8.0C	IDEAL 13.0c-13	TD 12-1/4" Section			

Bit Hydraulics Calculations			PowerDrive Serial No.			PUMP HOURS		Motor Run Information	
Enter data in blue areas			PART	PFIX	SN	START	CUM	Motor type	Serial number
Pump Flow 900	Bit Nozzle / 32 1 19	TFA 0.130	Electronics	CRSEM-BA	94	0:00	21:08	N/A	N/A
Mud Weight 1.16	2 13	0.130	Steering Section	CRSC-AA	92	0:00	21:08	Bend type	Bend Angle
Bit Diameter 12.25	3 13	0.130	Collar	CRSPA	88	0:00	21:08	N/A	N/A
Bit Flow 900	4 13	0.130	Power Generation	CRSSA	90	0:00	21:08	Slab type	Slab Gauge
Bit Pressure Drop 143	5 13	0.130	Sub	0		0:00		N/A	N/A
Hydraulic HP 75	6 13	0.130						Off Bottom pressure	On Bottom pressure
HSI 0.6	7	0.130						N/A	N/A
Impact Press. 259	8							Backreaming Hours	Total Reaming Hours
	9							N/A	N/A
	10							Bearing Play after run (mm)	N/A
	Bit TFA =	0.778	Motor		N/A			Mud properties	
								Mud Company	BHI
								Mud Type	AQUA-DRILL
								MW at start of run	1.16 sg
								MW at end of run	1.19 sg
								Funnel Viscosity	63 sec
								Plastic Viscosity	27
								Yield Point	17
								Maximum DH Temp. deg C	81 degC
								Sand %	0.5%
								Solid %	6.00%

Run Summary

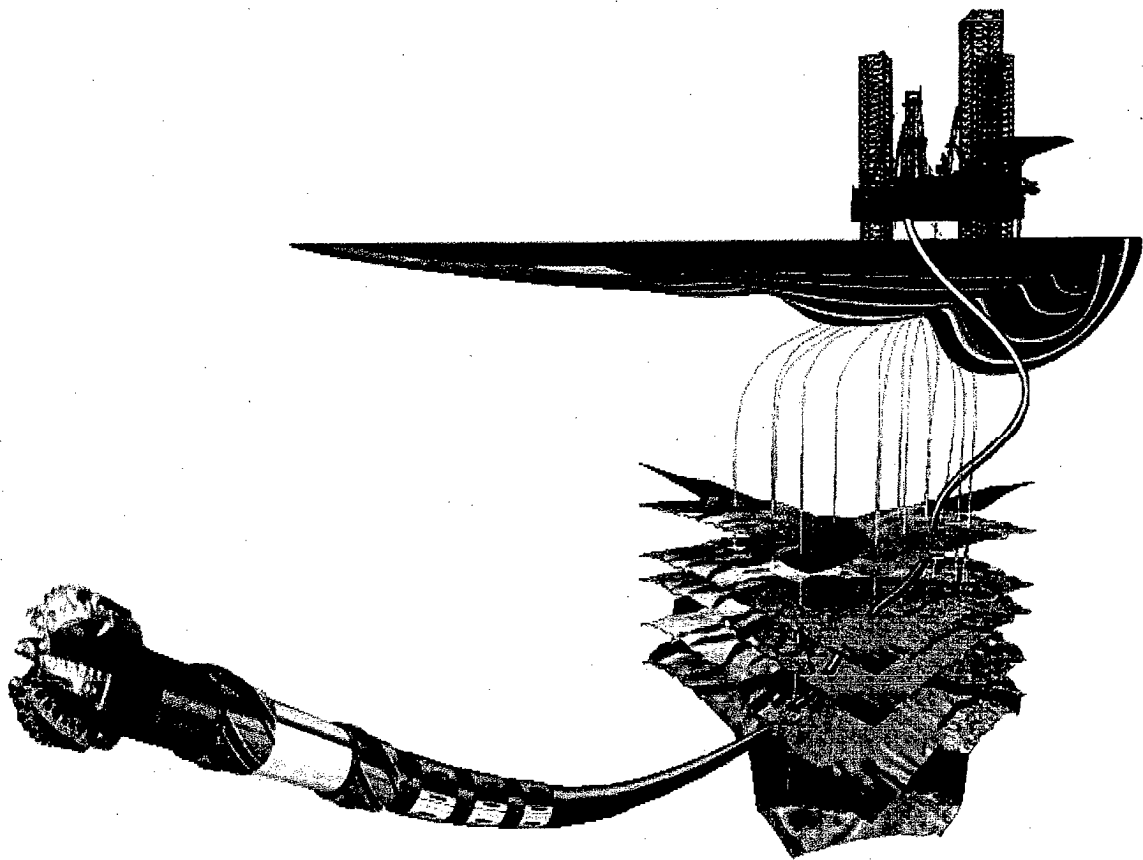


PTTEP Australasia



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9. Dull Bit Grading





PDC GRADING CHART



BIT RUN DATA # 1

Bit Size:	12 1/4"
Manufacturer:	Hycalog
Bit Type:	RSX616-A16
Serial Number:	221010
New Bit:	Yes
IADC Code:	M422
Number of Nozzles:	6
Size of Nozzles:	13
Number of Blades:	6
Number of Cutters:	53 6
Size of Cutters:	16mm 13mm
T.F.A. (sq ins):	0.78
W.O.B.:	17.2 klbs
Depth In:	3130.0
Depth Out:	3411 m
Meters Drilled:	281 m
Rotating Hours:	27.08
Metres Rotary:	281.00
Total Circulating Hours:	36.05
Average R.O.P.:	10.38 m/hr
Circulation Rate:	806 gpm
R.P.M. at Bit:	130
Motor Used:	No
Motor Size:	-
Bit Good for Rerun:	Yes

WELL DATA

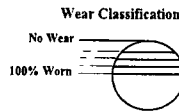
Date:	4-Mar-09
Drilling Supervisor:	Noel Treasure
Rig:	West Atlas
Well Number:	Montara H1 ST1
Rig Contractor:	Seadrill
Hole Angle:	89°
Date in:	01-Mar-09
Date Out:	4-Mar-09
BHA #	1

MUD AND LITHOLOGY DATA

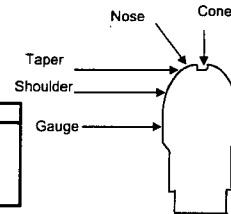
Majority Formation:	Siltstone
Other Formation:	Sandstone
% Formation:	80%
Mud Type:	Aqua-Drill
Mud Weight:	1.16
PV:	27
YP:	14
% Solids:	5.00
% Oil / Water:	0/100
Circulating Temperature:	76.00

COMMENTS:

PDC GRADING



Wear Classification	(A)	(A)	(B)	(C)	(D)	(E)	(B)	(F)
No Wear	1	1	CT	C	X	IN	NO	BHA
100% Worn								



PDC GRADING CHART AS PER IADC NOMENCLATURE

CUTTING STRUCTURE				B	G	REMARKS	
INNER ROWS	OUTER ROWS	DULL CHAR.	LOC ATION.	BRING SEALS	GAUGE 1/16"	OTHER CHAR.	REASON PULLED
(A)	(A)	(B)	(C)	(D)	(E)	(B)	(F)

(A)	0	No Wear
	8	No Cutting structure

(B)	BT	Broken Cutters
	BU	Balled Up
	CR	Cored
	CT	Chipped Cutters
	ER	Erosion
	HC	Heat Checking
	JD	Junk Damage
	LN	Lost Nozzle
	LT	Lost Cutters
	OC	Off-Center Wear
	PN	Plugged Nozzle/ Waterway Passage
	RG	Rounded Gauge
	RO	Ring Out
	WO	Washed Out - Bit
	WT	Worn Cutters
	NO	Bit is Green
	IM	Impact
	DEL	Delamination
	SPL	Spalling
	BF	Bond Failure

(C)	C	Cone
	N	Nose
	T	Taper
	S	Shoulder
	G	Gauge
	A	All Angles

(D)	X	Fixed Cutter Bits
-----	---	-------------------

(E)	1	In Gauge
	1/16	1/16" Undergauge
	2/16	1/8" Undergauge etc.

(F)	BHA	Change BHA
	DMF	Downhole Motor Fail
	DSF	Drill String Fail
	DST	Drill Stem Test
	DTF	Downhole Tool Fail
	LOG	Run Logs
	RIG	Rig Repair
	CM	Condition mud
	CP	Core Point
	DP	Drill Plug
	FM	Formation Change
	HP	Hole Problems
	HR	Hours
	PP	Pump Pressure
	PR	Penetration Rate
	TD	Total Depth
	TQ	Torque
	TW	Twist-Off
	WC	Weather Conditions
	WO	Washout/Drill String
	ROP	Rate of Penetration



PDC GRADING CHART



BIT RUN DATA # 2

Bit Size:	12 1/4"
Manufacturer:	Hycalog
Bit Type:	RSX616-A16
Serial Number:	221010
New Bit:	No
IADC Code:	M422
Number of Nozzles:	6
Size of Nozzles:	13
Number of Blades:	6
Number of Cutters:	53
Size of Cutters:	16mm 13mm
T.F.A. (sq ins):	0.78
W.O.B. :	25.4 klbs
Depth In:	3411.0
Depth Out:	3796 m
Meters Drilled:	385 m
Rotating Hours:	9.40
Metres Rotary:	385.00
Total Circulating Hours:	21.08
Average R.O.P.:	40.96 m/hr
Circulation Rate:	895 gpm
R.P.M. at Bit:	130
Motor Used:	No
Motor Size:	-
Bit Good for Rerun:	Yes

WELL DATA

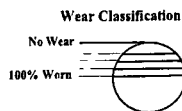
Date:	5-Mar-09
Drilling Supervisor:	Noel Treasure
Rig:	West Atlas
Well Number:	Montara H1 ST1
Rig Contractor:	Seadrill
Hole Angle:	90°
Date in:	04-Mar-09
Date Out:	5-Mar-09
BHA #:	2

MUD AND LITHOLOGY DATA

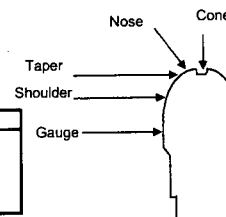
Majority Formation:	Sandstone
Other Formation:	Siltstone
% Formation:	100%
Mud Type:	Aqua-Drill
Mud Weight:	1.19
PV:	27
YP:	17
% Solids:	6.00
% Oil / Water:	0/100
Circulating Temperature:	81.00

COMMENTS:

PDC GRADING



Wear Classification	(A)	(A)	(B)	(C)	(D)	(E)	(B)	(F)
	1	1	CT	C	X	IN	NO	TD



PDC GRADING CHART AS PER IADC NOMENCLATURE

CUTTING STRUCTURE				B	G	REMARKS	
INNER ROWS	OUTER ROWS	DULL CHAR.	LOC ATION.	BRING SEALS	GAUGE 1/16"	OTHER CHAR.	REASON PULLED
(A)	(A)	(B)	(C)	(D)	(E)	(B)	(F)

(A)	0	No Wear
	8	No Cutting structure

(D)	X	Fixed Cutter Bits
-----	---	-------------------

(E)	1	In Gauge
	1/16	1/16" Undergauge
	2/16	1/8" Undergauge etc.

(B)	BT	Broken Cutters
	BU	Balled Up
	CR	Cored
	CT	Chipped Cutters
	ER	Erosion
	HC	Heat Checking
	JD	Junk Damage
	LN	Lost Nozzle
	LT	Lost Cutters
	OC	Off-Center Wear
	PN	Plugged Nozzle/ Waterway Passage
	RG	Rounded Gauge
	RO	Ring Out
	WO	Washed Out - Bit
	WT	Worn Cutters
	NO	Bit is Green
	IM	Impact
	DEL	Delamination
	SPL	Spalling
	BF	Bond Failure

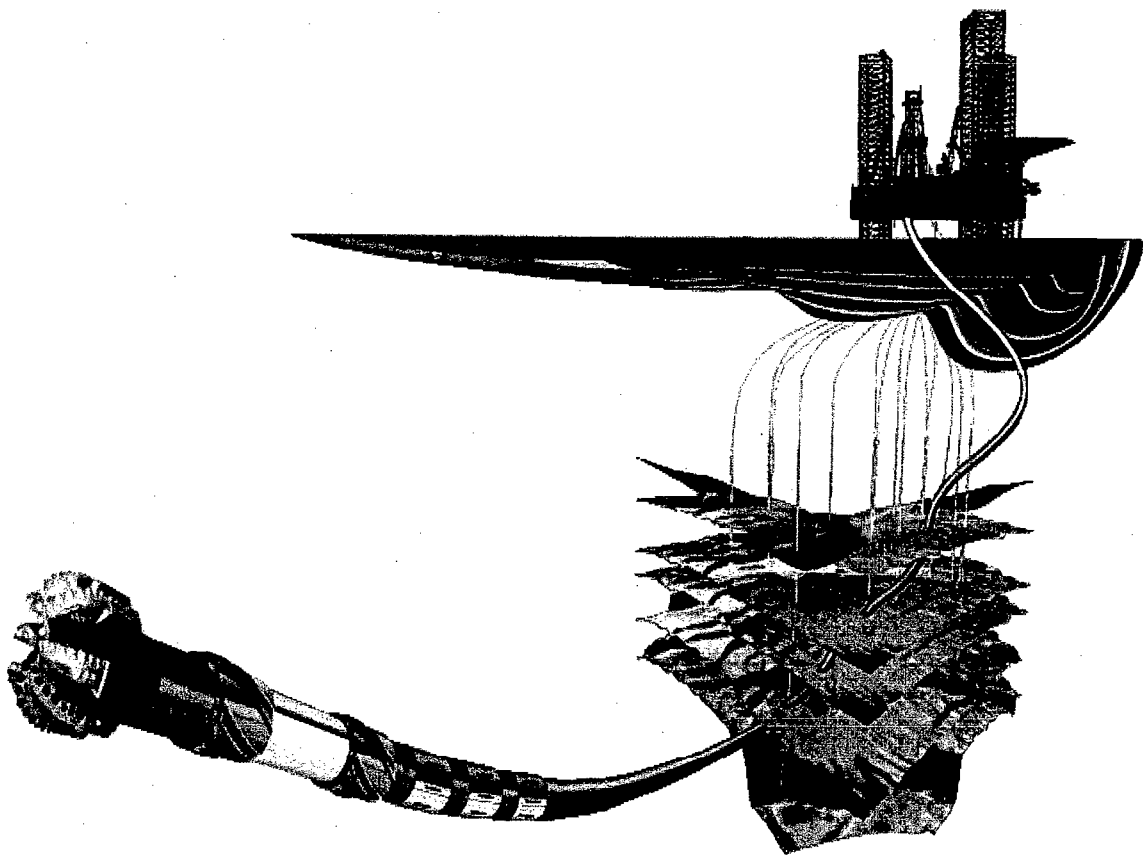
(F)	BHA	Change BHA
	DMF	Downhole Motor Fail
	DSF	Drill String Fail
	DST	Drill Stem Test
	DTF	Downhole Tool Fail
	LOG	Run Logs
	RIG	Rig Repair
	CM	Condition mud
	CP	Core Point
	DP	Drill Plug
	FM	Formation Change
	HP	Hole Problems
	HR	Hours
	PP	Pump Pressure
	PR	Penetration Rate
	TD	Total Depth
	TQ	Torque
	TW	Twist-Off
	WC	Weather Conditions
	WO	Washout/Drill String
	ROP	Rate of Penetration

(C)	C	Cone
	N	Nose
	T	Taper
	S	Shoulder
	G	Gauge
	A	All Angles



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10. Service Quality Issues



**Schlumberger****Issue #1: Xceed motor failure**

Xceed was unresponsive to DD's downlink commands. At the same time, HSPM demodulation is showing RTSTAT_f=24 for Xceed which means "motor failure". Client and town were made aware immediately. The decision to POOH was made by 12:30PM.

The Xceed had accumulated approximately 147.84 pump hours when it failed. It had also suffered severe stick slip in the previous runs during Montara GI ST1. It was still operating as expected and was showing no negative symptoms prior to failure.

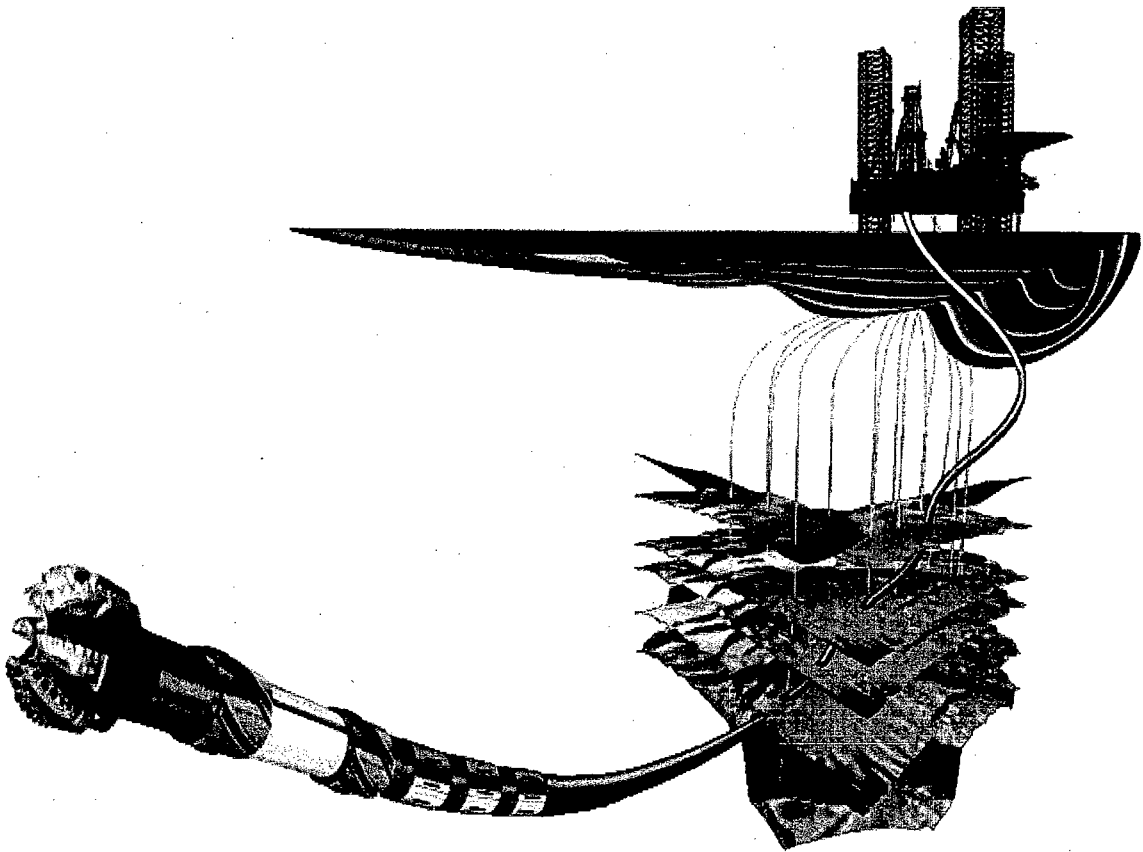
Issue #2: Washout in connection between PowerPulse DH saver sub & ARC

When the BHA was on surface, the connection between the PowerPulse (SN#VH13) DH saver sub (SN# OSS0807114B) and the ARC (SN#1948) Uphole box was visibly washed out on the threads. Very minor erosion was seen at the shoulder. The wear-bands on the ARC were significantly worn on the downhole side of each, indicating a harsh drilling environment. No standpipe pressure loss and/or increase in TRPM was detectable in real-time during drilling or tripping.



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11. Depth Control Summary





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Depth Control Summary

1. Depth acquisition was performed as per the procedure outlined in the D&M-SQ-S016 Depth Control Standard (Version 1.0, 30-January-2004).
2. Depth is referenced to the Driller's Depth. The Driller's pipe tally is used to check acquired depth at frequent intervals. A Depth Control worksheet containing comparisons between the driller's pipe tally and the acquisition system bit depths is archived with Final Well Backup. This worksheet covers details description of any depth corrections made. A copy of the Depth Control worksheet will be made available upon request.
3. Depth Acquisition Equipment:

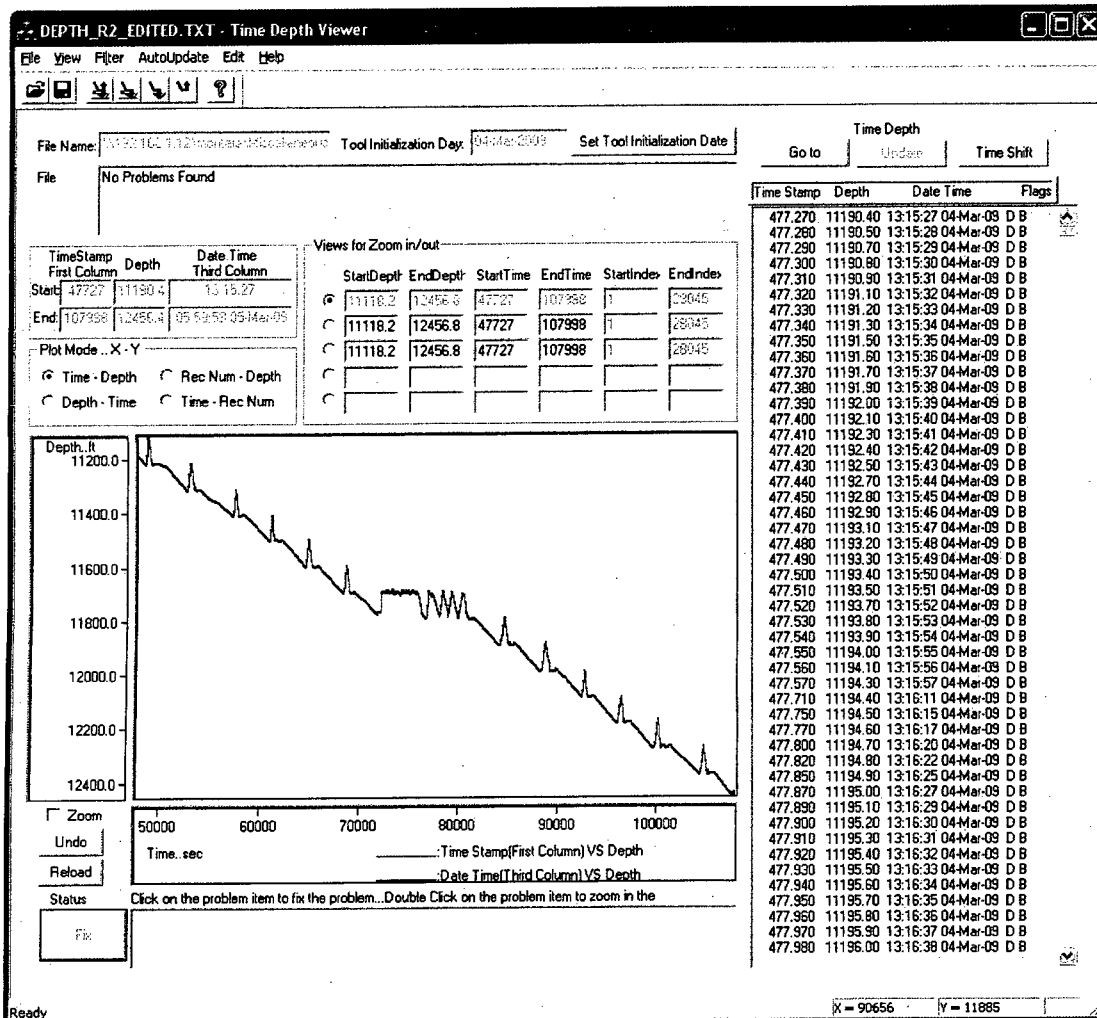
Depth control was undertaken using the Precision Depth Assembly (PDA). This consists of a Depth Encoder System (DES) and a Clamp Line Tensiometer (CLT) to automate depth tracking. A Depth Wire Calibrator (DWC) is also part of this equipment, but was not available at the rig site. An Interactive manual depth calibration was made to calibrate the Depth Encoder System.

Sensor	Serial Number	Date of Calibration	Remark
Hookload	CLT-DA 0723340	1-March-2009	During RIH Run 1
Drawworks Encoder	DSE-001354	1-March-2009	Prior to RIH Run 1



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Depth versus Time – BHA# 2 / MWD Run# 2



Raw Depth/Time Files

No editing was performed on the raw depth/time file for BHA# 3/ MWD Run# 2

Tool Dump Files

No editing was performed on the tool dump files



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Sensor Calibrations

cal Analog Sensor Calibration Panel ? X

Hookload | Pump Pressure | Surface Torque | Surface Amps | Surface Rpms | Analog DWE | Analog GTE

Offset (A0) Gain (A1)

Working [-334.493] [292.7536] [Default]

Current [-334.493] [292.7536]

HookLoad [71.03] klbf [1.39] V

Graph showing HookLD (Y-axis, 0 to 400) vs V (X-axis, 0.00 to 8.00). A linear calibration line is plotted. Legend: Working Calibration, Current Calibration.

User Input Data

	HookLoad		
	klbf	V	
1	292.00	2.140	▲
2	90.00	1.450	
3			Take Point
4			Delete Point
5			Clear All
6			▼

Calculate View History Accept Exit Help

11:49:39 Comment: [HookLD]

Hookload Sensor Calibration (1-March-2009)



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cal Analog Sensor Calibration Panel

Hookload | Pump Pressure | Surface Torque | Surface Amps | Surface Rpm | Analog DWE | Analog GTE

Offset (A0) Gain (A1)

Working Default

Current

Pump Pressure psi V

o Working Calibration
o Current Calibration

User Input Data

	Pump Pressure		
	psi	V	
1	30.00	1.010	↑
2	2390.00	1.980	
3			Take Point
4			Delete Point
5			Clear All
6			↓

11:49:56 Comment: Sensor (PumpPr)

Pump Pressure Calibration (1-March-2009)



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Drawworks Calibration Panel [?] [X]

6 Wire Calibration | 4 Wire Calibration | Manual | Interactive Manual

Offset: m WL Pos: m Block Pos: m

Counts: Wrap No: On/Off Status: **MANUAL**

Block position (m)	pulses/m
0	463.193717
4.67	433.232365
14.14	403.48415
24.55	383.379203
40	370

User Input Data

	Block Pos	PPM
1	4.67	463.193717
2	14.14	433.232365
3	24.55	403.48415
4	40	383.379203
5		
6		

Take Pt Clear Calculate Accept Reject Exit Help

11:50:26 COMMENT: Set to Manual Mode Calibration

Drawworks Encoder Calibration (1-March-2009)



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Depth Initialization Panel [X]

Slip Control

Control Type

Manual

Automatic

Manual Input

Slips Threshold kbf

OSTP (%)

ISTP (%)

Disable In Slips If OnBottom: [v]

PumpPressure Override for Slip [v]

Slips Correction m

Hookload Control

Block Weight kbf

Kelly Weight kbf

Offbot Threshold m

HKLD Incrmnt lb/m

Kelly Length m

Drawwork Dirctn ()

Geograph Dirctn ()

High Hookload kbf

Mode Chng Value m

Rig Type

Fixed Rig

Floating Rig

Floater Configurations

Drilling/Reaming	Tripping
<input type="radio"/> DW+MCE+GTE	DW
<input type="radio"/> GEO+GTE	DW
<input type="radio"/> GEO+GTE	Not Tracking
<input type="radio"/> DW+GTE	DW

GTE Parts of Line: ()

When computing depth from block position, depth can be compensated from rig position. The rig position or GTE Direction is: [v]

Drill Time h

Depth System for Drawworks